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ABSTRACT

This volume examines a number of facets of the labor market experience and behavior of middle-aged men. It is based on a unique set of longitudinal data collected by personal interviews among the same sample of men in 1966, 1967, 1969, and 1971. The data contain a complete record of the labor market activity of the men over a five-year period, allowing a look at both the antecedents and consequences of particular events and courses of action. The papers in this volume do not purport to analyze all of the aspects of the labor market experience of middle-aged men, but rather focus on particular problems or aspects of behavior that have significant bearing on the welfare of this group of men. The chapter headings include: (1) Earnings and Employment of Middle-aged Men--A Special Study of their Investment in Human Capital; (2) Middle-aged Job Changers; (3) Occupational Mobility among Middle-aged Men; (4) Early Retirement; and (5) Internal-external Control and Labor Market Experience. (Author/PC)

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THE PRE-RETIREMENT YEARS:

Five years in the work
lives of middle-aged men

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FOREWORD

For nearly a decade the Center for Human Resource Research of The Ohio State University and the U.S. Bureau of the Census, under separate contracts with the Manpower Administration of the U.S. Department of Labor, have been engaged in the National Longitudinal Surveys (NLS) of labor market experience. Four subsets of the United States civilian population are being studied: men who, at the inception of the study, were 45 to 59 years of age; women 30 to 44 years of age; and young men and young women between the ages of 14 and 24. These groups were chosen because each is confronted with special labor market problems that are challenging to policy makers: for the two groups of youth, high unemployment rates; for the older cohort of women, problems associated with re-entry into the labor force after children are in school or grown; and for the men, problems associated with skill obsolescence and age discrimination that may make re-employment difficult if jobs are lost.

For each of these four population groups, a national probability sample of the noninstitutional population was drawn by the Census Bureau in 1966, and interviews have been conducted periodically by Census enumerators utilizing schedules prepared by the Center for Human Resource Research. Originally contemplated as covering a five-year period, the surveys have been so successful and attrition so small that they have been continued beyond the originally planned expiration dates. As of the end of 1974, the older cohort of men had been interviewed in 1966, 1967, 1968 (mail), 1969, 1971, and 1973 (telephone); the older cohort of women in 1967, 1968 (mail), 1969, 1971, 1972, and 1974 (telephone); the young men annually between 1966 and 1971 and by telephone in 1973; and the young women annually between 1968 and 1973.

A substantial body of literature has already appeared based upon the NLS data. Twelve volumes of comprehensive reports have been published on surveys conducted through 1969 (1970 in the case of the young women). These have appeared under the titles of The Pre-Retirement Years (men: 3 volumes); Career Thresholds (boys: 4 volumes), Dual Careers (women: 2 volumes); and Years for Decision (girls: 3 volumes). In addition, about 75 special reports on specific topics have been prepared by staff members of the Center for Human Resource Research and other researchers throughout the country who have acquired NLS public-use tapes.

The present volume is based on the surveys of the middle-aged men through 1971. It differs from the previous volumes in The Pre-Retirement Years series in two major respects. First, it makes no attempt at a comprehensive coverage of all aspects of the data, but rather consists of a series of research papers on topics that are conceived to be important in understanding the labor market experience and status of men in middle age. Second, rather than relying exclusively on tabular analysis as have the previous volumes, all of the papers except the introductory one utilize multivariate statistical techniques.

Without attempting to escape their ultimate responsibility for whatever limitations their papers may have, the authors wish to acknowledge their debt to a large number of persons without whose contributions neither the overall study nor the present volume would have been possible. Although personally unknown to us, the several thousand members of the sample who have generously agreed to repeated interviews over the years must be mentioned first, for they have provided the raw materials for our effort.

Officials of the Manpower Administration have been very helpful to us over the years in providing suggestions for the design of the National Longitudinal Surveys and in carefully reviewing preliminary drafts of our reports. We wish to acknowledge especially the continuous support and encouragement of Howard Rosen, Director of the Office of Manpower Research and the valuable advice provided by Stuart Garfinkle, Frank Mott, Jacob Schiffman, and Rose Wiener, who have at various times over the years served as monitors of the project. Ms. Wiener's comments on an earlier draft of the present volume were especially helpful, as were those of a number of other persons in the Department of Labor and other agencies who read portions of the manuscript at her request, including Lola M. Ireland, Jack Karlin, Donald M. Landay, and Steven Sternlieb.

The research staff of the Center for Human Resource Research has enjoyed the continuous expert and friendly collaboration of personnel of the Bureau of the Census, who have been responsible for developing the samples, conducting all of the interviews, coding and editing the data, and preparing the initial versions of the computer tapes. The names of those who have been involved in these activities over the years are too numerous to be mentioned individually, but we should like to acknowledge especially our debt to Earle Gerson, Chief of the Demographic Surveys Division and to his predecessors Daniel Levine and Robert Pearl; to Robert Mangold, Chief of the Longitudinal Surveys Branch; to Marie Argana, his immediate predecessor; and to their colleagues Dorothy Koger, Gregory Russell, and Terry Soifer. These are the individuals in the Census Bureau with whom we have had immediate contact in the recent past. In addition, we wish to express our appreciation to James Johnson and Alvin Etzler of the Field Division for directing the data collection; to David Lipscomb and Eleanor Brown and their staff of the Systems Division for editing and coding the interview schedules; and to Thomas Meerholz, Stuart Lynn, and Benny Sharp for the preparation of the computer tapes.

The process of revising the computer tapes received from the Census Bureau and producing all of the tables and regressions incorporated in this volume was the responsibility of the Data Processing Unit of the Center for Human Resource Research under the able direction of Robert Shondel and his predecessor John Grasso. To Gary Schoch, Production Supervisor of the Unit, Harvey Forstg, his predecessor, and their staff we express our thanks for serving so skillfully as intermediaries between us and the computer.

The authors profited from comments on earlier drafts of their work by their co-authors as well as by other members of the research staff of the Center, particularly John Grasso, Carol Jusenius, Steven Sandell, and Richard Shortlidge. In addition to the specific research assistance mentioned in the introductory note to each chapter, they also wish to acknowledge the conscientious assistance of Brenda Feder, Sue Hummer, Ellen Mumma, and Regina Parks in serving as liaison with the Data Processing Unit of the Center and with the Census Bureau. Ms. Mumma also provided valuable assistance in editing the volume.

Finally, we are grateful to Marc Parnes for preparing the charts that appear in Chapters I, II, and V and to Kandy Bell and Dortha Gilbert for the speed, accuracy, and almost exceptionless good humor with which they typed--and often retyped to correct errors made by others--the several versions of the text and tables.

Herbert S. Parnes
November 1974

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CHAPTER I
INTRODUCTION AND OVERVIEW

Herbert S. Parnes*

Middle age is generally recognized as a distinctive period in the life cycle. The physical, psychological, and social changes that generally accompany this period of life include the departure of children, the death of parents, the increasing susceptibility to a variety of infirmities, and a number of other subtle and not-so-subtle reminders of one's mortality.¹ In addition, and partly as a result, middle age is also associated with the onset of more or less distinctive labor market problems, such that both in the United States and elsewhere the attainment of age 40 or 45 has long been recognized as the source of special labor market disadvantage.²

This volume examines a number of facets of the labor market experience and behavior of middle-aged men. It is based on a unique set of longitudinal data collected by personal interviews with the same sample of men in 1966, 1967, 1969, and 1971. Since the data contain a complete record of the labor market activity of the men over a five-year period, they allow one to perceive both the antecedents and consequences of particular events and courses of action. Moreover, the five years in question are an unusually interesting half decade, for they should reflect whatever short-run impact the Civil Rights Movement has had upon the relative employment status of middle-aged black men. Also, they include a three-year span in which the labor market was relatively tight and improving (1966-1969) as well as a two-year period during which unemployment rose considerably (1969-1971). The fact that changes between 1967 and 1969 can be compared with those between 1969 and 1971 for the same group of individuals permits one to analyze the effect of a change in the economic environment on the labor market experience of the men under consideration.

There is no universally accepted specification of the span of years embraced by "middle age," although retirement is often thought of as constituting its upper limit, at least for men. Here the age span under

* I am indebted to Randall H. King for his capable assistance in preparing the materials for the empirical portion of this chapter.

¹ See Neugarten (1968); Riley and Foner (1968). Complete citations for this and all subsequent references are presented at the end of the chapter.

² Ross and Ross (1960).

consideration is from 45 to 64, since the sample of men were between the ages of 45 and 59 when first interviewed. The oldest respondents were thus on the eve of conventional retirement age at the close of the five-year period.³

I LABOR MARKET PROBLEMS OF MIDDLE-AGED MEN

To say that men in this age category face special labor market problems is not to suggest that a majority of them are in distress. On the contrary, as the previous reports in this series have demonstrated,⁴ a very large majority of them enjoy a favorable status and favorable roles in the labor market as measured by regularity of employment, occupational assignment, and degree of job satisfaction. Most of them have moved up the occupational ladder during the course of their careers and regard their current occupations the best they have ever held.⁵

Nevertheless, there are several interrelated factors that constitute at least potential hazards to satisfactory labor market experience by men in their middle years. One of these is an increase with advancing age in the incidence of chronic health conditions and disabilities⁶ which, at the worst, may require withdrawal from the labor market, or may pose barriers to re-employment if a job is lost for other reasons. Another is the fact that middle-aged workers have, on average, less education than younger workers and that their education is less likely to be relevant to current occupational requirements, which also creates some difficulty in competing for jobs.⁷ The occupational and industrial distribution of middle-aged workers also contributes to some of their labor market problems. That is, they tend to be disproportionately concentrated in older and declining segments of the economy, where even long seniority may not provide immunity to layoff.⁸

Because of their long tenure middle-aged men are, on average, less likely than younger men to experience layoffs or discharges, or, for that

³In the remainder of this volume all references to age unless otherwise specified, will be to the ages attained by the men as of the time of the 1971 interview.

⁴Parnes et al. (vol. 1, 1970; vol. 2, 1970; 1973)

⁵Parnes et al. (vol. 1, 1970), p. 128.

⁶Moore (1968).

⁷U.S. Department of Labor (1964).

⁸Sheppard (1969).

matter, to leave their jobs voluntarily.⁹ However, while the middle-aged man is thus less likely than his younger counterpart to become unemployed, the likelihood of his remaining unemployed is much higher.¹⁰ The net result of these two influences is to create unemployment rates for men in their forties, fifties and early sixties that are slightly higher than those for younger men.¹¹

There is abundant evidence of long-standing discrimination by employers against older job applicants,¹² and it would appear that not all of it has at least thus far been eradicated by the Age Discrimination in Employment Act of 1967 and the anti-discrimination laws that exist in all but 15 states.¹³ The hiring preferences of employers that militate against the re-employment of middle-aged workers stem to some extent from the health and educational disadvantages referred to above, and to some extent from fears that insurance, pension, and training costs will be higher for older than younger workers. While it is clear that the age preferences of employers cannot be dismissed entirely as reflecting irrational prejudice,¹⁴ it seems equally clear that not all of them can be defended on economic grounds.¹⁵

Even for men who remain steadily employed, middle age is a period during which movement up the occupational ladder is likely to cease. In his twenties and thirties a man can realistically look forward to the attainment of unmet career goals; if he hasn't achieved them by his forties or fifties, however, the chances are that he never will. Some men--particularly those with more schooling--may continue to move up, but others may actually slip down.¹⁶ Likewise, the period of substantial income growth does not for most men extend into the middle years. While real earnings, on average, continue to rise, they do so at a lower rate than at earlier ages, reflecting primarily economy-wide productivity increases.¹⁷

⁹Ross and Ross (1960).

¹⁰U.S. Department of Labor (1956); Sheppard (1969); Turner and Whittaker (1973).

¹¹U.S. Department of Labor (1964).

¹²Ross and Ross (1960).

¹³U.S. Department of Labor (1974).

¹⁴Ross and Ross (1960); Berkowitz and Burkhauser (1969).

¹⁵Ross and Ross (1960); Wirtz (1965).

¹⁶Jaffe (1971), Chapter 6.

¹⁷Jaffe (1971), Chapter 7.

Finally, it is during later middle age that considerations of retirement begin to become relevant to most men, and some retirements actually occur. The labor force participation rate of men dips below the 90 percent level in the upper fifties, and drops to less than 75 percent for men 60 to 64 years of age.¹⁸ Poor health is an important factor in early retirement,¹⁹ but there is increasing evidence that substantial minorities of men look forward to early retirement and make the decision freely.²⁰ Mandatory retirement, while rarely occurring during middle age as defined here, hangs over the heads of almost half of all men as they enter their late 60's.²¹ However, this proportion exaggerates the prevalence of the problem of "forced" retirement, since there is evidence that relatively small proportions of those covered by mandatory retirement provisions actually want and are able to continue to work beyond the stipulated age.²² This is not, however, to minimize the impact of mandatory retirement upon that minority.

II PLAN OF THE PRESENT VOLUME

The papers in this volume do not purport to analyze all of the aspects of the labor market experience of middle-aged men that have been outlined above. Even less do they promise to exploit all of the data that have been collected by the surveys on which they are based. Rather each paper focuses on a problem or on an aspect of behavior that is of particular interest to its author(s) and that has a significant bearing on the welfare of this group of men. Although all of the authors are members of the same research staff, neither in planning the volume nor in putting its several pieces together has there been an attempt to force individual interests into a common mold or to induce individual researchers to accept uncongenial conceptual frameworks or methods of analysis in the interest of some a priori sense of theoretical or methodological integrity. Whatever may have been lost in the logic of organizational structure and in internal consistency has hopefully been fully compensated by the eclecticism that has resulted.

The chapter to follow explores the extent to which post-school training helps to account for differences in earnings among middle-aged

¹⁸ U.S. Bureau of the Census (1973), Table 216.

¹⁹ Reno (1971).

²⁰ Barfield and Morgan (1969); Crawford and Matlow (1972).

²¹ Farnes et al. (1970), vol. 1, p. 175.

²² Schulz (1974).

men, with particular emphasis on the training that has taken place during the five years covered by the study. The paper serves not only to test certain aspects of human capital theory, but has obvious relevance to policy issues. Given the intimate association between income and welfare, it is important to identify the factors that can be instrumental in affecting income distribution.

In Chapter III, the extent and character of voluntary interfirm mobility among middle-aged men are analyzed with a view to evaluating the allocative efficiency of the labor market and assessing how well it serves the interests of men in their middle years. With these objectives in mind, the chapter focuses on factors associated with a man's propensity to change jobs, and with the likelihood of an actual voluntary separation. Also, the job changes that have occurred over the five-year period are analyzed to ascertain how they have affected the economic and psychological welfare of those who made them.

Another dimension of mobility is addressed in Chapter IV. Specifically, this chapter examines gross changes in occupational assignment over the five-year period covered by the study, and relates these to the changes that occurred over the lifetime of the men prior to the time the longitudinal surveys began. It then explores the factors associated with movements up and down the occupational ladder during the five years under consideration. Finally, it evaluates the consequences of occupational mobility with respect to both economic and psychological rewards.

The phenomenon of early retirement is examined in Chapter V. The objective is to ascertain the factors associated with retirement prior to age 65 both on the basis of the reported expectations of the men in the sample and on the basis of actual withdrawals from labor market activity during the course of the five years covered by the study. Of particular interest is the extent to which such retirement occurs voluntarily while the individual is in good health and the extent to which it results either from an involuntary loss of job or from health problems that make it impossible to continue working. In addition to analyzing the determinants of early retirement, the chapter also describes the post-retirement work experience, work plans, and financial status of middle-aged men who, as of 1971, had reported themselves "already retired from a regular job."

An attitudinal measure is the principal focus of the analysis in Chapter VI. Specifically, the objective is to ascertain whether an individual's perception of the "payoff" to initiative--his "internality" as measured by the Rotter I-E scale²³--makes a contribution to various dimensions of labor market success. In addition, the authors take

²³A description of this variable, as well as all others used in the volume, will be found in the Glossary, Appendix B.

advantage of the fact that the Rotter I-E scale was administered twice by investigating its stability over a two-year period and seeking the correlates of the changes in the measure that are found to exist. Chapter VII draws together the principal findings of the several papers and discusses their implications both for the theory of the labor market and for public policy.

III THE LONGITUDINAL DATA BASE

The Sample

The studies in this volume are based on data from the National Longitudinal Surveys.²⁴ The members of the sample who provided the information were selected to be representative of the approximately 15 million men in the U.S. civilian noninstitutionalized population who in 1966 were between the ages of 45 and 59. The sample was drawn from the 235 Primary Sampling Units (PSU's) included in the experimental Monthly Labor Survey that was being conducted in the mid-1960's to test proposed changes in the Current Population Survey (CPS) interview schedule. Thus, sampling procedures were analogous to those used in the CPS.²⁵ However, in order to provide sufficient numbers of observations for reliable intercolor comparisons, the sampling ratio for black men was between three and four times as high as that for white. Thus, the sample of 5,020 men originally interviewed in 1966 included 3,518 white men, 1,420 black men, and 82 men of other races. The last-mentioned group has been eliminated from all of the analysis in this volume.

In addition to the difference in sampling weights between blacks and whites, there is also some variation within each color group. In part, this reflects a noninterview adjustment in weights that was made in the initial survey to account for members of the original sample who

²⁴These surveys have been designed by the Ohio State University Center for Human Resource Research under a contract with the Manpower Administration of the U.S. Department of Labor. The sample design, field work, and the initial stages of data processing are the responsibility of the U.S. Bureau of the Census under a separate contract with the Manpower Administration. In addition to the sample of middle-aged men on which the data of this volume are based, the National Longitudinal Surveys include three other age-sex cohorts: women between the ages of 30 and 44, young men between the ages of 14 and 24, and young women in the same age category. For a complete description of the surveys see Center for Human Resource Research (December 1973).

²⁵For a detailed description of the sampling, interviewing, and estimating procedures, see Appendix C.

were not interviewed. In part, it reflects further adjustments in the weights to make the sample conform to the known distribution in 1966 of the United States' civilian population by residence, age, color, and sex. Although the tables in the report show numbers of sample cases rather than blown-up population estimates, all calculations (percentage distributions, means, regressions) are based upon weighted observations.²⁶

It is important to note that although the data collected in the 1966 survey are representative of the population of this age cohort of men in that year, the same is not true for the information collected in any subsequent year, for there has been no attempt to adjust the sampling weights to take account of attrition. Since the studies in this volume are for the most part restricted to respondents who were reinterviewed in 1971, it must be kept in mind that the sample on which the data are based is not necessarily representative of the civilian population of males 50 to 64 years of age in that year. Between the initial survey in 1966 and the 1971 survey, the sample shrank from 5,020 individuals to 4,175, an attrition rate of 17 percent. Of this total, however, approximately 8 percentage points represented losses attributable to death and cannot therefore bias the 1971 sample. The remaining 9 percentage point shrinkage in the sample was not randomly distributed. For example, as is indicated by the data in Appendix Table 1A-1,²⁷ the 1971 sample tends slightly to underrepresent nonmarried men, college educated men, and men employed in the construction industry. The differences, however, are in most cases not substantial.²⁸

The Surveys

Subsequent to the initial interview in 1966 respondents were reinterviewed in 1967, 1969, and 1971; an abbreviated mailed survey was conducted in 1968.²⁹ Each of the surveys was conducted by approximately

²⁶The sole exception is Appendix Table 1A-1, showing the noninterview rates in the 1971 survey.

²⁷Tables cited in this chapter are all to be found in Appendix A.

²⁸For example, among the highest noninterview rates are those that prevail for men whose current or last jobs were in the construction industry at the time of the 1966 survey. Among the lowest are those for men in agriculture. As compared with the average noninterview rate of 10 percent, the rate for construction workers was 13 percent and that for agricultural workers was 5 percent.

²⁹Although the National Longitudinal Surveys were originally intended to cover a five-year period, a decision was reached in 1973 to extend the surveys for an additional five years so long as the problem of attrition did not become unduly severe. The additional surveys were to be conducted biennially by telephone, ending with a face-to-face interview at the end of the ten-year period. The first telephone survey of the middle-aged men was conducted in mid-1973. Of those eligible, 93 percent were interviewed.

300 to 400 interviewers of the Field Division of the Bureau of the Census, utilizing schedules prepared by the Center for Human Resource Research.³⁰ Each survey extended over a two- to three-month period;³¹ thus, although the term "survey week" is used throughout the report to refer to the reference week (preceding the date of the interview), it should be borne in mind in interpreting the data that this is not the same week for all respondents.

Nature of the Data

Stated most succinctly, the data collected during the course of the National Longitudinal Surveys include an abbreviated lifetime work history of each respondent up to the time of the first survey, a detailed work history during the period covered by the surveys, and information about a variety of social, psychological, and economic characteristics of the respondents that are hypothesized to influence labor market behavior. No particular purpose would be served by attempting to catalog at this point the types of information that have been collected, but Appendix B contains a glossary defining all of the variables used in this volume and describing how they are measured.

While detailed description is unnecessary, the analytical potential inherent in the longitudinal character of the data deserves emphasis. The fact that the data have been collected at several points in time over a five-year period makes it possible to examine the extent and character of change in important aspects of the labor market status of the men, and this in itself is a substantial contribution because such data are relatively uncommon. But much more important is the ability to relate an individual's characteristics at one point in time to his characteristics or status at a subsequent point and to examine changes in one set of characteristics in the light of changes in another set. This allows analysis of developmental processes and the exploration of directions of causation that can be accomplished in no other way.

Perhaps the clearest examples of the unique contributions that longitudinal analysis can make are provided by studies of relationships between attitudinal measures and actual behavior. For example, in the study of interfirm mobility in Chapter III a respondent's satisfaction with his current job and his propensity to make a job change as measured in 1966 are related to the likelihood of his changing employers between

³⁰For the 1971 interview schedule, see Appendix D.

³¹To balance the work load of the Census Bureau, the month in which interviewing began was changed during the course of the study. Prior to 1969 the interviewing process began in May; in 1969 and 1971 interviews began in July.

1966 and 1971. The only way such an investigation could be carried out on the basis of a single survey would be by means of a retrospective measure of attitudes--clearly indefensible because of the possibility that a respondent might rationalize his 1966 attitude in the light of his actual subsequent behavior. As another example, the longitudinal nature of the data enables the authors of Chapter 6 to examine the question whether adverse labor market experience is likely to alter a man's perception of the efficacy of initiative--an impossible undertaking without the administration of the psychological test at two points in time and the collection of data on labor market experience both prior to and during the intervening period.

The benefits of longitudinal analysis are by no means restricted to cases in which attitudinal variables are being examined. For example, the association that is known to exist in the cross section between reported health condition and labor force participation has to some extent been suspect because of the possibility--particularly pronounced in the case of prime-age men for whom there is no socially acceptable substitute for labor market activity--that the association may reflect a tendency to use poor health as an "excuse" for being out of the labor force. In the study of early retirement reported in Chapter 5 this ambiguity is avoided by relating the reported health condition of employed individuals in 1966 to the probability of subsequent withdrawal from the labor force. An example of a completely different kind is provided by the investigation of the effects of training in Chapter II. The author is able not only to compare the end-of-period earnings of individuals with and without training during the five years covered by the study, but also to inquire how the earnings of the two groups compared even prior to any training experience. This permits him to say something about the extent to which the ostensible influence of training programs on earnings is "real," and the extent to which it simply reflects the fact that training is a selective process. The foregoing are purely illustrative. Indeed, most of the analysis in the remaining chapters of this volume exploits the longitudinal nature of the data, and it is this which imparts a unique quality to the research reported here.

IV THE FIVE-YEAR PERIOD: AN OVERVIEW

In the remainder of this introductory chapter we examine the magnitude and direction of change in some major facets of the lives of middle-aged men over the five years of the study. The data provide valuable insights into the character of the labor market experience of middle-aged men during the half decade under consideration and constitute an illuminating backdrop against which the more detailed and more analytical presentations of the subsequent chapters may be viewed.

Respondents' Perception of Progress

Before turning to objective measures, it is of some interest to examine the respondents' perceptions of the course of their work lives

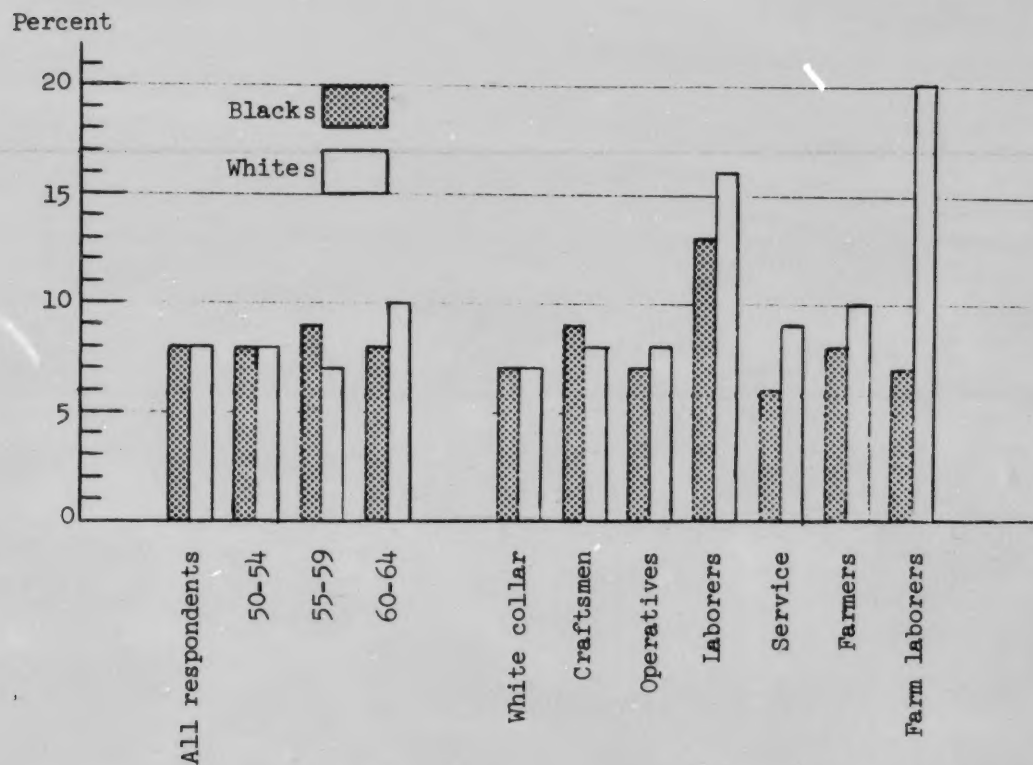
over the five-year period. In the 1971 interview they were asked, "All in all, so far as your work is concerned, would you say that you've progressed during the past five years, moved backward, or just about held your own?" It is impressive that less than a tenth--and identical proportions of whites and blacks--thought they had become worse off (Chart 1.1). In contrast, about half of the whites and more than a third of the blacks believed they had made progress over the five-year period (Chart 1.2); the remaining four-tenths of the whites and over half of the blacks believed they had "held their own" (Table 1A-2). It is especially interesting that there is very little variation by age in this pattern of response, although older men within the cohort are slightly less likely than younger men to report progress. On the other hand, there are fairly pronounced differences among occupational categories. Higher proportions of white collar workers than of other occupational categories reported progress, and among blue collar workers the proportion reporting progress declines with declining skill level. The higher overall proportion of white men reporting progress as compared with black men is in large measure a function of the differences in occupational distribution between the two groups, for the proportions are rather similar within all occupational categories except service and farm workers.

Among the men who regarded themselves better off at the end of the five-year period, the principal reason by far was related to income (over two-fifths), but such factors as increased responsibility or improved status were mentioned by as many as one-fourth and improved knowledge and skills by more than a tenth (Table 1A-3). Among the much smaller number who reported that they were worse off, health and factors relating to aging were mentioned most frequently by black men, while declining income was the modal response of white men.

Family Status

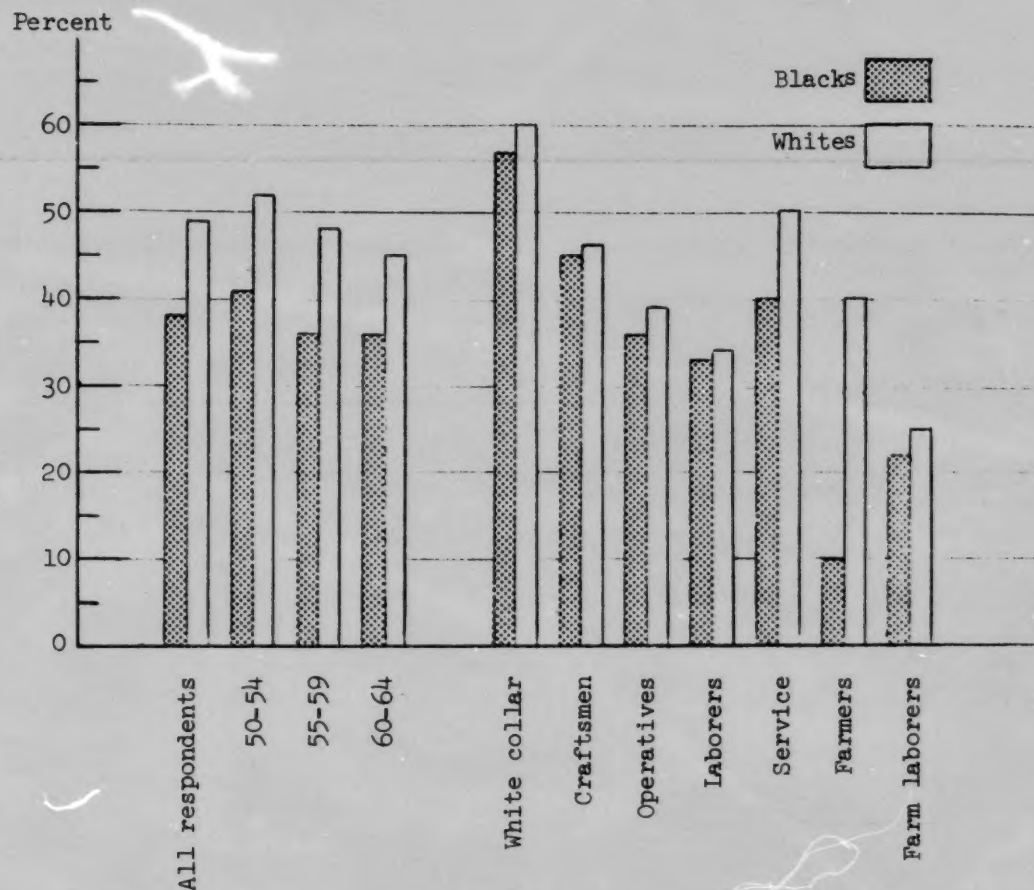
The vast majority of middle-aged men are married, and little change takes place in this regard over a half decade. In 1966 nine-tenths of the whites and eight-tenths of the blacks were married and living with their wives; by 1971 these proportions had dropped by only 2 percentage points for whites and 5 percentage points for blacks. In contrast to the stability in marital status, a substantial reduction took place in the extent of dependency upon the respondents as children left home and aged parents died. When the surveys began, three-fifths of each color group had two or more dependents, but five years later this proportion had dropped to two-fifths for the whites and to somewhat less than half for the blacks (Table 1A-4). At the other extreme, the number of men with four or more dependents dropped precipitously. Although these trends are equally discernible in all three age categories of both color groups, there are dramatic differences in the extent of dependency among the three age groups in 1971. For example, almost four-fifths of the oldest age category of whites had no more than one dependent, while this was true of less than half of those in the youngest age group. It is

Chart 1.1 Percent of Respondents Reporting Retrogression During Past Five Years, by Age, Occupation and Race: 1971



Source: Appendix Table 1A-2.

Chart 1.2 Percent of Respondents Reporting Progress During Past Five Years, by Age, Occupation, and Race: 1971



Source: Appendix Table 1A-2.

noteworthy that in every age category the extent of dependency is greater among blacks than among whites.

Health Condition

Among both black and white men there has been some deterioration in health over the five years covered by the study--at least as perceived and reported by the respondents themselves (Chart 1.3). In 1971, 29 percent of the whites reported health problems affecting work compared with 25 percent in 1966. For the blacks, the corresponding proportions were 30 percent and 25 percent. There are pronounced age differences in these trends, as well as a modest interaction between race and age. Among those under 60 years of age at the end of the period very little net deterioration in health occurred either for whites or blacks. However, among those in their early sixties, the proportions with health problems affecting work had increased fairly substantially for both whites and blacks, and somewhat more for the latter than for the former.

These data almost certainly understate the extent to which the incidence of health problems increased between 1966 and 1971. It will be noted that while the proportion increased between 1966 and 1969 (5 percentage points for whites and 3 for blacks), between 1969 and 1971 there was an apparent decline of 1 percentage point in the proportion of white men with health problems and an apparent increase of only 2 points in the case of blacks. These anomalous results are probably attributable to the fact that the wording of the health question in 1971 differed from that in 1966 and 1969.³²

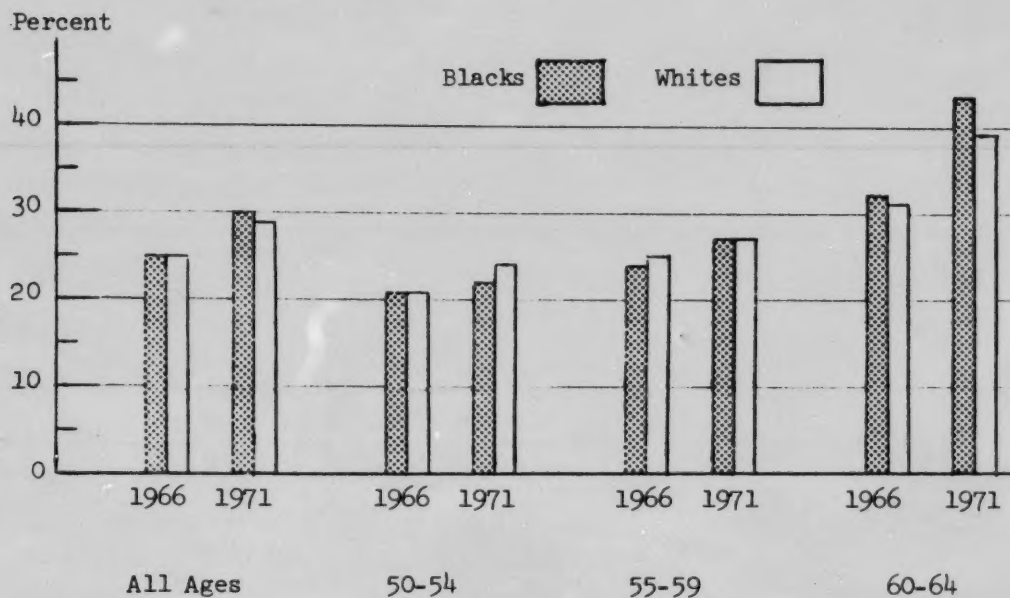
The net changes in health condition described above reflect gross movements in both directions (Table 1A-6). Slightly under a tenth of both whites and blacks reported health problems in 1966 but not in 1971. On the other hand, 12 percent of the whites and 14 percent of the blacks had been free of problems when the study began but had developed them by 1971.

Labor Force and Employment Status

As measured by activity in the survey weeks, there was a steady increase over the five-year period in the proportion of both white and black men who were outside of the labor force (Chart 1.4). Because the extent of the increase was greater for blacks than for whites, the intercolor difference in percent out of the labor force was more

³²In the two earlier years there was a series of three questions as follows: (1) "Does your health or physical condition keep you from working?" (2) "Does your health or physical condition limit the kind of work you can do?" (3) "Does your health or physical condition limit the amount of work you can do?" In the 1971 survey there was a single question that read, "Do you have any health problem or condition that limits in any way the amount or kind of work you can do?"

Chart 1.3 Percent of Respondents with Health Problems, by Age and Race: 1966 and 1971



Source: Appendix Table 1A-5.

pronounced at the end of the period than at the beginning. It is noteworthy that most of this widening of the differential occurred between 1969 and 1971, suggesting that the loosening of the labor market in that two-year period had a differentially adverse impact on blacks. The evidence with respect to unemployment rates is consistent with this interpretation (Chart 1.5). In 1966, 1967, and 1969 unemployment rates were very low for both color groups. Between 1969 and 1971, however, the rate doubled for blacks but increased by only two-fifths for whites.

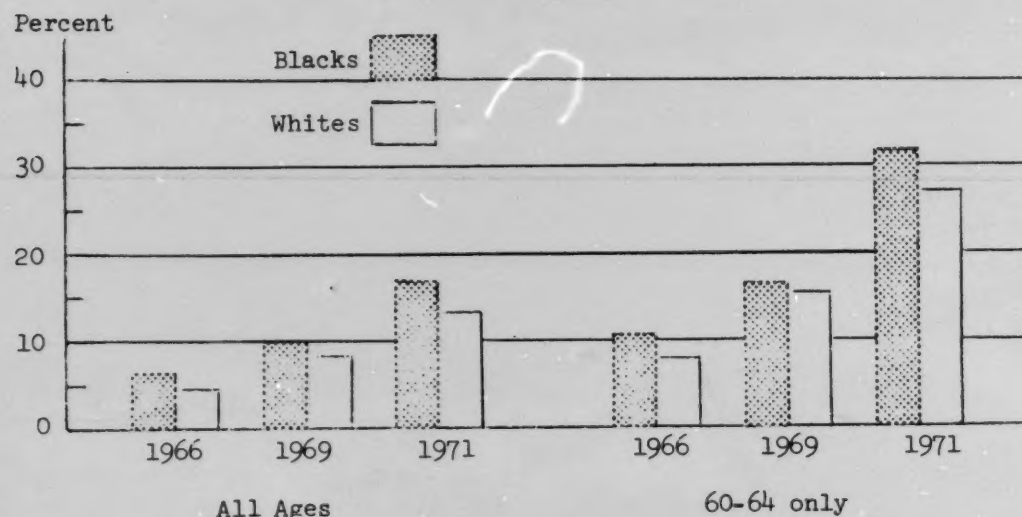
The steady increase over the five-year period in the proportion of men outside the labor force, while discernible within each of the three age groups, is most pronounced among those who were in their early sixties at the end of the period. In the survey week of 1971, 31 percent of the black men 60 to 64 years of age and 27 percent of their white counterparts were outside the labor force.

These data, incidentally, provide a fascinating illustration of the difference between cross-sectional and longitudinal analysis. For example, in the 1966 cross-sectional data one perceives a 3.5 percentage point difference between the labor force participation rates of white men in the intermediate and oldest age groups (Table 1A-7). On this basis, one might have been led to predict that the intermediate age group five years later would have reduced its labor force participation by that amount. In actuality, however, the drop was almost twice as great, reflecting the influence of changes in the environment over time (e.g., the increasing prevalence of early retirement provisions) and, possibly, differences in the characteristics of the two five-year age cohorts (e.g., attitudes toward work and retirement).

When the analysis of labor force participation is confined to men who reported no health problems affecting work in any of the survey years, the picture that emerges is quite different in two important respects (Chart 1.6). In the first place, although the proportion of men outside the labor force grows between 1966 and 1971, it is under 5 percent for both blacks and whites even in the latter year--approximately one-third the level that prevails for all respondents. Second, the proportion of black men outside the labor force each year is actually lower than that of white men. Moreover, this differential obtains in each age category in 1971 except among men 60 to 64 years of age, in which case the proportion of black men outside the labor force is 1 percentage point higher than that of white.

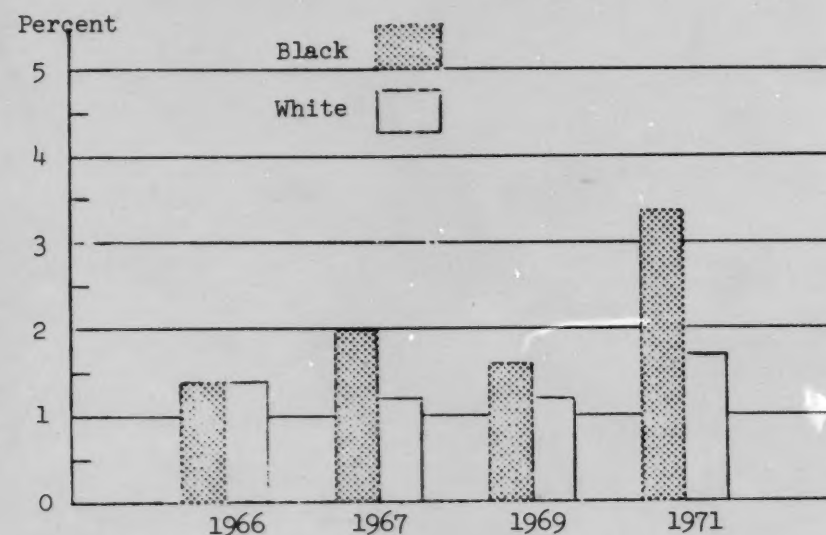
When labor force and employment status in 1971 and 1966 are cross-classified (Table 1A-9), the overwhelming majority of those who were out of the labor force in the survey week of 1966 are seen to have remained out in the survey week of 1971: four-fifths of the whites and nine-tenths of the blacks. For the whites this proportion was virtually

Chart 1.4 Percent of Respondents Out of Labor Force in Survey Week, by Age and Race: 1966, 1969, 1971



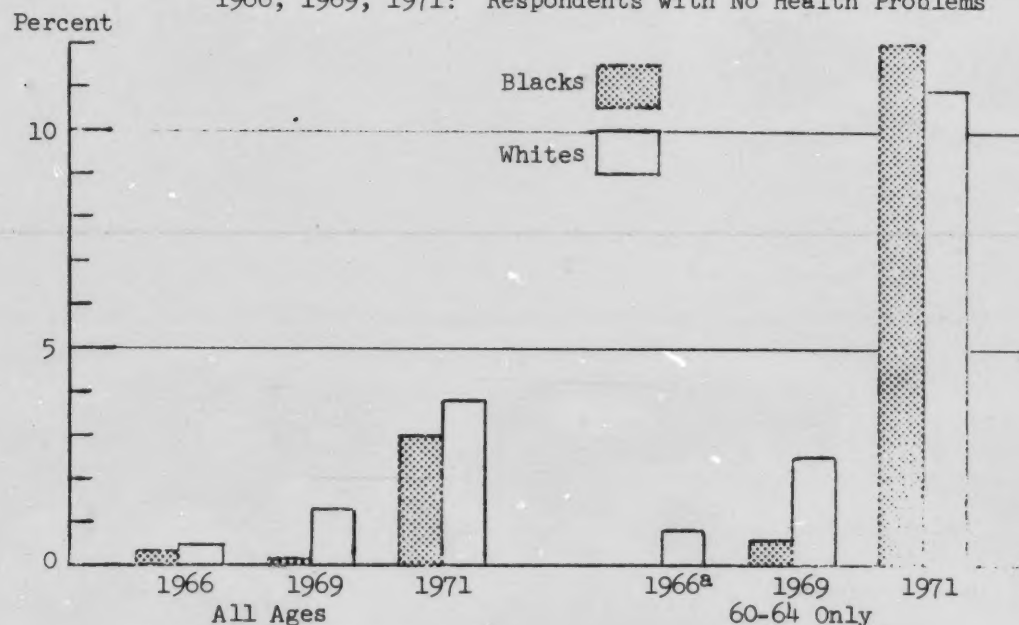
Source: Appendix Table 1A-7

Chart 1.5 Unemployment Rate in Survey Week, by Race: 1966, 1967, 1969, 1971



Source: Appendix Table 1A-7.

Chart 1.6 Percent Out of Labor Force in Survey Week, by Age and Race, 1966, 1969, 1971: Respondents with No Health Problems



^a Percent of black respondents is 0.0.

Source: Appendix Table 1A-8.

invariant among the three age categories; for the blacks it was higher for the older categories (over 95 percent) than for the youngest (75 percent).³³

Number of Weeks Unemployed

Survey week unemployment rates substantially understate the proportion of middle-aged men who experience unemployment during the course of a year. In the calendar year preceding the inception of the study, 9 percent of the white men and 16 percent of the black men reported at least one week of unemployment (Table 1A-10). Over the two-year period between the 1969,

³³ All of the relationships discussed in this chapter were examined with an age breakdown. Where age differences appeared, as in this case, the text refers to them even if they are not shown in the tables.

and 1971 surveys, the corresponding proportions were 10 percent and 11 percent.³⁴ Moreover, unemployment tends to be a recurring problem for men who experience it. Those who suffered unemployment in 1965 were much more likely than others to experience additional unemployment in the two-year period between the 1969 and 1971 surveys; also, the longer the duration of unemployment in 1965, the longer it was in the later period. Irrespective of color, more than nine-tenths of the men who escaped unemployment in 1965 were equally fortunate in the two-year period preceding the 1971 survey. In contrast, among those who experienced one or more weeks of unemployment in 1965, only seven-tenths were free of unemployment in the later period.

Number of Weeks Out of Labor Force

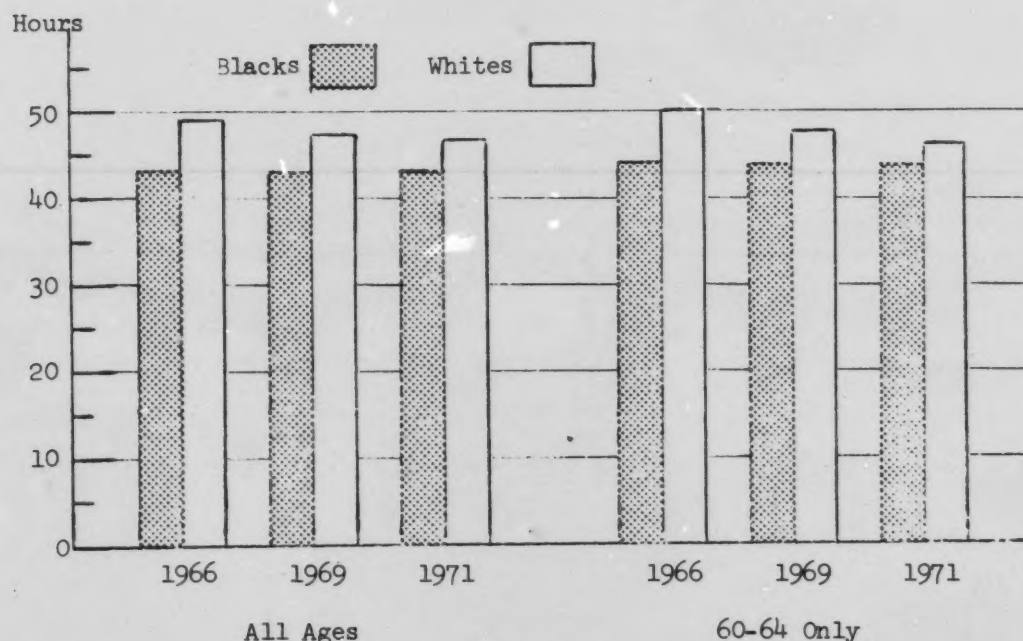
A substantial majority of the men in the sample have had very firm attachments to the labor market over the course of the five-year period (Table 1A-11). In calendar 1965, about four-fifths of each color group--slightly more of the whites than the blacks--were in the labor force continuously. Even during the two-year period between 1969 and 1971 approximately two-thirds missed no weeks of labor force participation. Moreover, the evidence of the stability in labor force status that has already been noted on the basis of survey week data is also evident here. That is, the vast majority of men who were out of the labor force for all of calendar year 1965 were also out during the entire period between the 1969 and 1971 surveys. On the other hand, of those continuously in the labor force in 1965, 74 percent of the whites and 71 percent of the blacks were also in continuously during the later two-year period.

Hours Worked in Survey Weeks

While labor force participation dropped more for blacks than for whites over the five-year period, the reverse was true of the number of hours worked per week by those who were employed (Chart 1.7). Nevertheless, white men continued to work longer hours than black men in 1971, as they had in 1966. Among whites there was a continuous decline in average hours worked, cumulating to 2.5 hours between 1966

³⁴ It is difficult to believe that relatively fewer blacks experienced unemployment over the two-year period 1969-1971 than during calendar year 1965, especially in view of the trend in survey week unemployment rates from 1966 to 1971. It may be that black respondents were more likely to have forgotten a period of unemployment in reporting retrospectively over a two-year period than for a one-year period.

Chart 1.7 Mean Number of Hours Worked in Survey Week, 1966-1971,
by Age and Race: Employed Respondents



Source: Appendix Table 1A-12.

and 1971.³⁵ The extent of reduction was related to the age of the respondents: 1.7 hours among those in their early fifties as compared with 4.2 hours among those who were in their early sixties. In the case of black men the overall decline was only six-tenths of one hour, and this was not systematically related to age.

Class of Worker

Very little net change occurred in the distribution of respondents according to class of worker over the five-year period. Among blacks

³⁵ This was greater than the reduction in hours which took place over the same period in the economy as a whole. Between 1966 and 1971 gross average weekly hours of production or nonsupervisory workers in the nonagricultural private economy dropped from 38.6 to 37.0 (U.S. Department of Labor, 1973), p. 190, Table C-3.

and whites alike there was a very slight rise in the proportion of respondents who were government workers, at the expense of declines in the proportions of self employed individuals and of private wage and salary workers (Table 1A-13). When class of worker in 1966 and in 1971 are cross-classified, it is clear that the apparent stability in the net figures conceals counterbalancing movements from one class of worker category to another that are not inconsequential. For example over a fifth of both blacks and whites who had been self employed in 1966 had entered wage and salary employment in government or the private sector by 1971. On the other hand, 5 percent of the whites who had been private wage and salary earners in 1966 moved into self employment by 1971, while the corresponding proportion for blacks was 3 percent.

Occupation

The extent and character of occupational change are analyzed in depth in Chapter 4. It is sufficient here to observe that net changes in the distribution of respondents among the major occupation groups were virtually imperceptible during the course of the study. Nevertheless, there was considerably greater occupational movement than the data on net changes would suggest. Overall, about 26 percent of the white men and 32 percent of the black men were in different major occupation groups in 1971 than they had occupied in 1966.

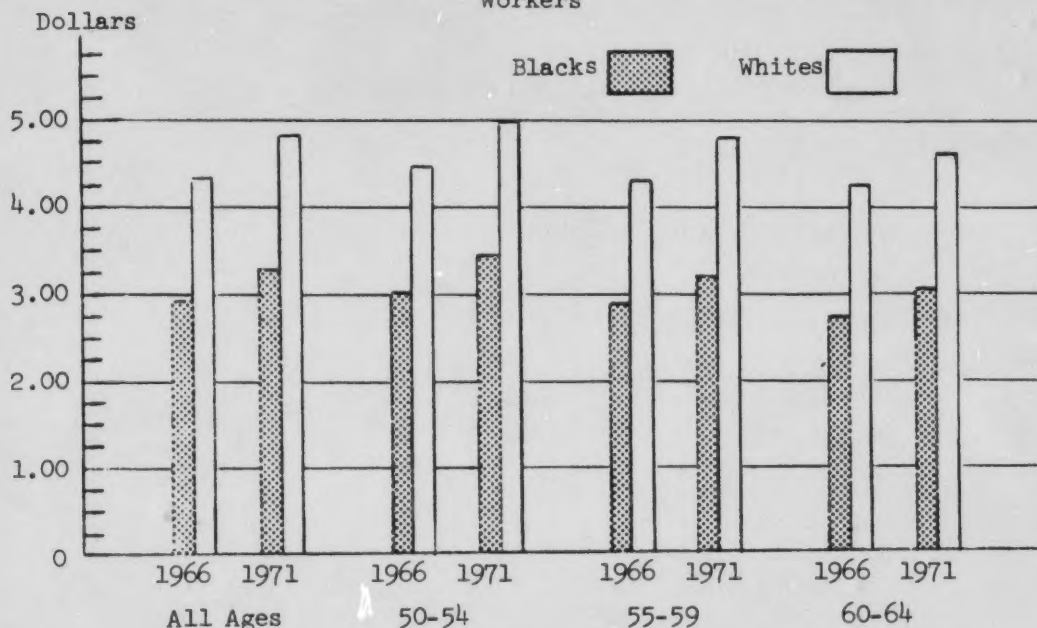
Hourly Earnings of Wage and Salary Workers

Expressed in dollars of constant purchasing power (August 1971), average hourly earnings rose between the survey weeks of 1966 and 1971 by 11 percent for white wage and salary workers and by 12 percent for their black counterparts (Chart 1.8 and Table 1A-14). These rates of increase were somewhat higher than the average for all production and nonsupervisory workers on private nonagricultural payrolls in the economy as a whole.³⁶ The somewhat higher overall increase for blacks during the five-year period meant that the intercolor differential was reduced very slightly. The ratio of black-to-white average hourly earnings rose from 67 percent in 1966 to 68 percent in 1971.

The most interesting aspect of the data on real average hourly earnings is what they show about the relation between cross-sectional and longitudinal data. It will be noted that in every year and among

³⁶ According to the Bureau of Labor Statistics, average hourly earnings in the nonagricultural private sector rose from an annual average of \$2.56 in 1966 to \$3.43 in 1971, an increase of 34.0 percent (U.S. Department of Labor, 1973, Table C-3). During the same period, the Consumer Price Index rose by 24.8 percent (Economic Report of the President, 1973, p. 244). Thus, the increase in average hourly earnings in real terms was 7.4 percent.

Chart 1.8 Real Average Hourly Earnings in August 1971 Dollars, by Age and Race, 1966 and 1971: Employed Wage and Salary Workers



Source: Appendix Table 1A-14.

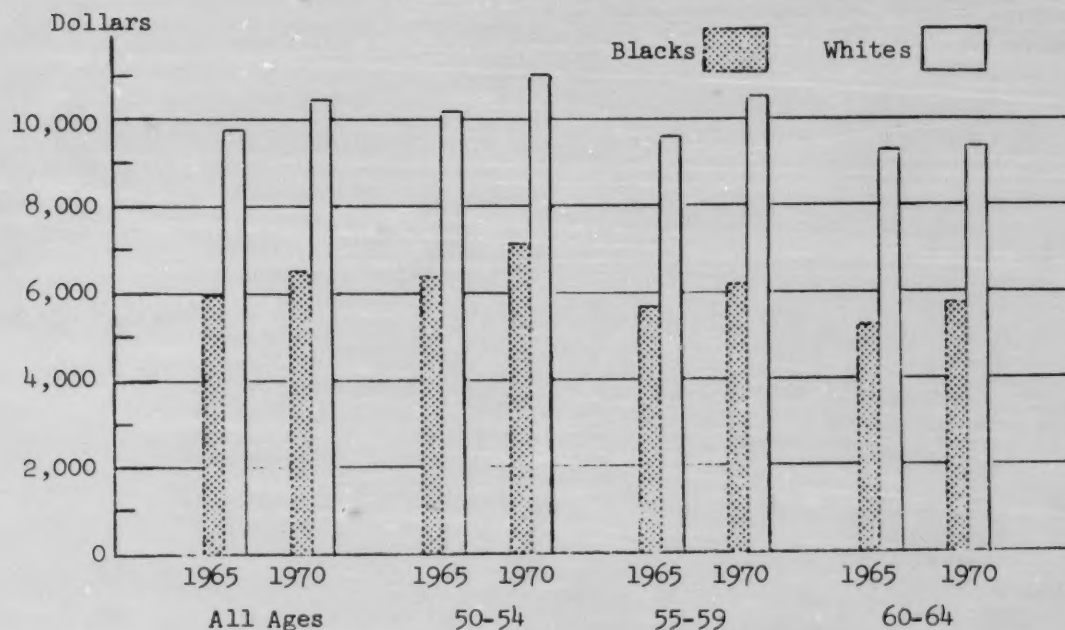
both blacks and whites there is an inverse relation between average annual earnings and age, leading to the impression that earnings decline as a man in his middle years grows older. If the cross-sectional relationship were an accurate predictor of what happens over time, one would expect each of the two younger age groups to experience a decrease in real earnings over the five-year period. Yet each of these age categories actually enjoyed an increase in excess of 10 percent.

In part this difference is attributable to the fact that cross-sectional relationship reflects the inverse association among men in this cohort between age on the one hand and education and occupation level on the other. In part, however, it reflects the fact that the upward movement of the economy-wide productivity escalator more than compensates for whatever tendency advancing age has to depress real earnings.

Annual Earnings of Wage and Salary Workers

Data on real annual earnings of men who were employed as wage and salary workers in each of the survey years tell substantially the same story as the hourly earnings data, with a few variations (Chart 1.9 and

Chart 1.9 Mean Real Annual Earnings in 1970 Dollars, by Age and Race, 1965 and 1970: Employed Wage and Salary Workers



Source: Appendix Table 1A-15.

Table 1A-15). For both blacks and whites the percentage increases in earnings on an annual basis over the five-year period were smaller than on an hourly basis because of the reductions that had occurred in hours worked. However, the disparity between the growth of hourly earnings and the growth of annual earnings was smaller for blacks than for whites. Consequently, while the black-to-white ratio of hourly earnings increased by only 1 percentage point over the period, the ratio of annual earnings rose from 60 percent to 62 percent. Overall, the increases in real annual earnings were about 7 percent for whites and 11 percent for blacks. However, for white men who had reached their sixties by 1971 the gain was much smaller--only 1 percent. For all age groups combined, virtually all of the gain in real income occurred during the first three years of the period; between 1968 and 1970 the rise was under 1 percent for whites and only slightly higher than 1 percent for blacks.

Degree of Job Satisfaction: Employed Respondents

Although the economic rewards of working increased, on average, over the five-year period between 1966 and 1971, the same cannot be said for psychic rewards. There is some evidence, at least, of a slight deterioration between 1966 and 1971 in the extent of satisfaction the men expressed in their jobs (Chart 1.10 and Table 1A-16). This was true of both whites and blacks, but less so for the latter. Perhaps more noteworthy than these relatively small changes is the fact that in each color group over nine-tenths of the men employed in 1971 (92 percent of the whites and 96 percent of the blacks) expressed positive reactions to their jobs, and almost half of each (47 percent of the whites and 50 percent of the blacks) said that they liked their jobs "very much."

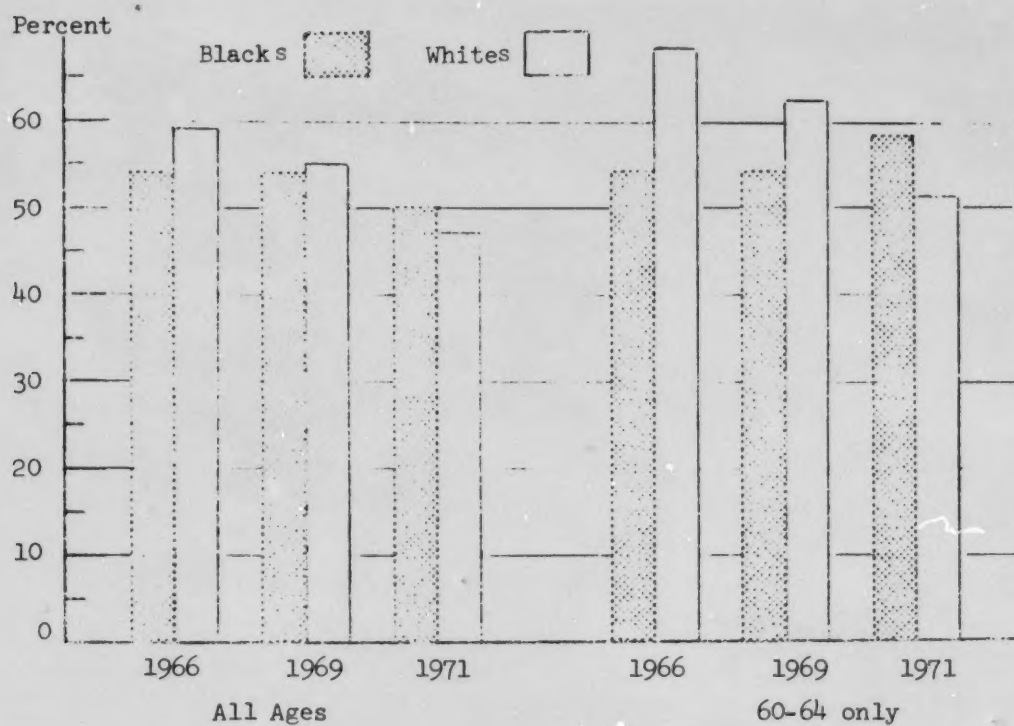
Annual Family Income

Up to this point, in examining earnings we have been confining our attention to those individuals who were employed as wage or salary workers at the time of each of the surveys. In focusing here on total family income, we include all respondents who were interviewed in each of the years, irrespective of employment status (Chart 1.11 and Table 1A-17). Between calendar years 1965 and 1970 real family income rose by 7 percent for married white men and by 9 percent for married black men. The black-to-white ratio of family income among married men thus increased from 59 percent in 1965 to 60 percent in 1970. In both color groups there was a monotonic inverse relationship between age and relative change in income; among married men in their early sixties real family income was actually lower in 1970 than in 1965 by 5 percent for both whites and blacks. The patterns of change among nonmarried men were considerably less regular.

Changes in total family income over the period are a somewhat misleading measure of change in economic welfare of the respondents, for they do not take cognizance of the decrease in the number of dependents that has been seen to have occurred among a substantial proportion of the group. When real family income is expressed on a per capita basis (Chart 1.12 and Table 1A-18) the average increase over the five-year period 1965-1970 is over one-third for married white men and over one-fourth for married black--five and three times as great, respectively, as the relative increases in total income. Again, the relative increase is inversely related to age, but in this case even the oldest age category of men experienced a rather substantial rise. Because the decline in dependency among blacks was smaller than among whites, the black-to-white ratio of real per capita family income among married respondents shrank over the period from 54 to 51 percent.

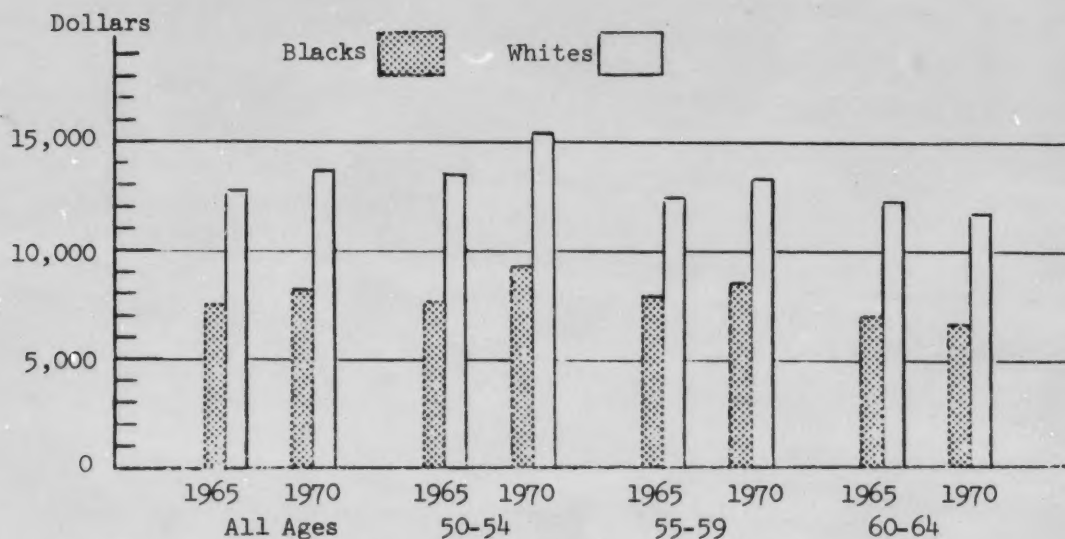
A cross-classification of 1965 and 1970 per capita income for married respondents, both expressed in terms of 1970 dollars, permits an examination of the pattern of gross changes over the five-year period (Table 1A-19). Reflecting the regression-toward-the-mean phenomenon, the likelihood of slipping into a lower per-capita-income category

Chart 1.10 Percent of Employed Respondents with High Job Satisfaction,
by Age and Race



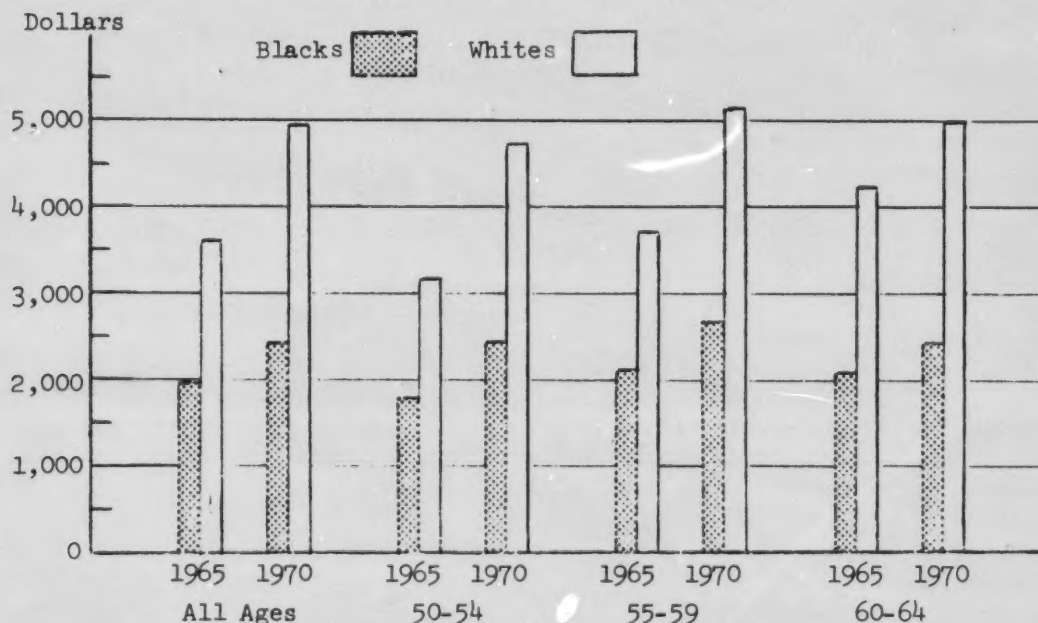
Source: Appendix Table 1A-16.

Chart 1.11 Mean Real Family Income in 1970 Dollars, by Age and Race, 1965 and 1970: Married Respondents



Source: Appendix Table 1A-17.

Chart 1.12 Mean Real Per Capita Family Income in 1970 Dollars, by Age and Race, 1965 and 1970: Married Respondents



Source: Appendix Table 1A-18.

increases fairly regularly as the base year per capita income increases. For the total group of married white men, only about 15 percent moved into a lower per-capita-income bracket, and even among those in their early sixties the proportion was under one-fourth. For the total group of married black men, about one in seven suffered a decline in per capita income across one or more income categories.

Net Assets

The average net asset position of the respondents also improved in real terms over the five-year period (Chart 1.13 and Table 1A-20).³⁷ The mean net assets of married white respondents was \$43,000 in 1971, an increase of 26 percent in real terms over 1966. For married blacks the comparable figure was \$9,000, a real increase of 38 percent from 1966. In per capita terms, the increases were, of course, even greater--62 percent for the whites and 71 percent for the blacks (Chart 1.14 and Table 1A-21). In terms of the per capita asset categories shown in Table 1A-22, fewer than 10 percent of the married respondents of each color group had lower real per capita assets in 1971 than in 1966.

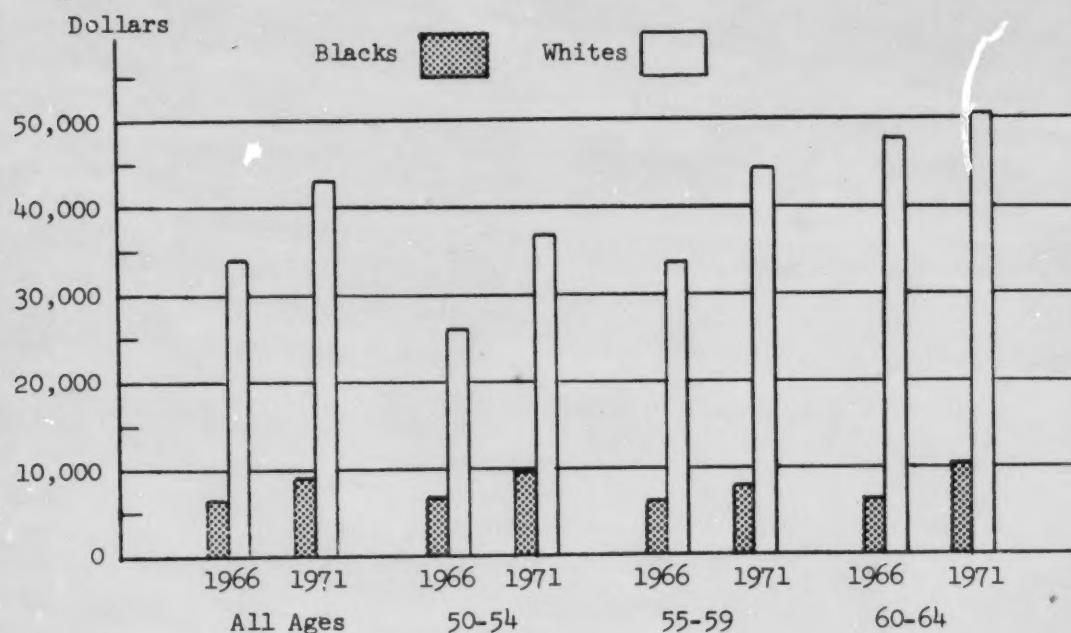
Summary

During the half decade covered by the present study substantial changes have occurred in the economic circumstances of middle-aged men, some benign and others less favorable. On average, the burden of dependency has declined with the passage of time as children have left home and parents have died. On the other hand, the incidence of health problems has risen, with adverse effects on work activity.

Labor market activity declined over the period as measured by labor force participation rates, by number of weeks in the labor force, and by weekly hours of work. For those who remained employed, however, real hourly earnings increased for all age and color groups, indicating that the cross-sectional relationships between age and earnings are poor predictors of the movement of real earnings over time. The same is true of annual earnings, although the relative increases were smaller than for hourly earnings both because of the downward trend in hours worked per week and in weeks worked per year. Average family income for the entire sample of men--including those who had left the labor force during the course of the study--increased in real terms over the five-year period. In this case, however, the increase did not prevail in all age groups. Among both black and white married men in their early sixties average real family income declined by about 5 percent. Because of the decrease in average number of dependents, increases in per capita family income were greater than in total income, and prevailed even for men in their early sixties.

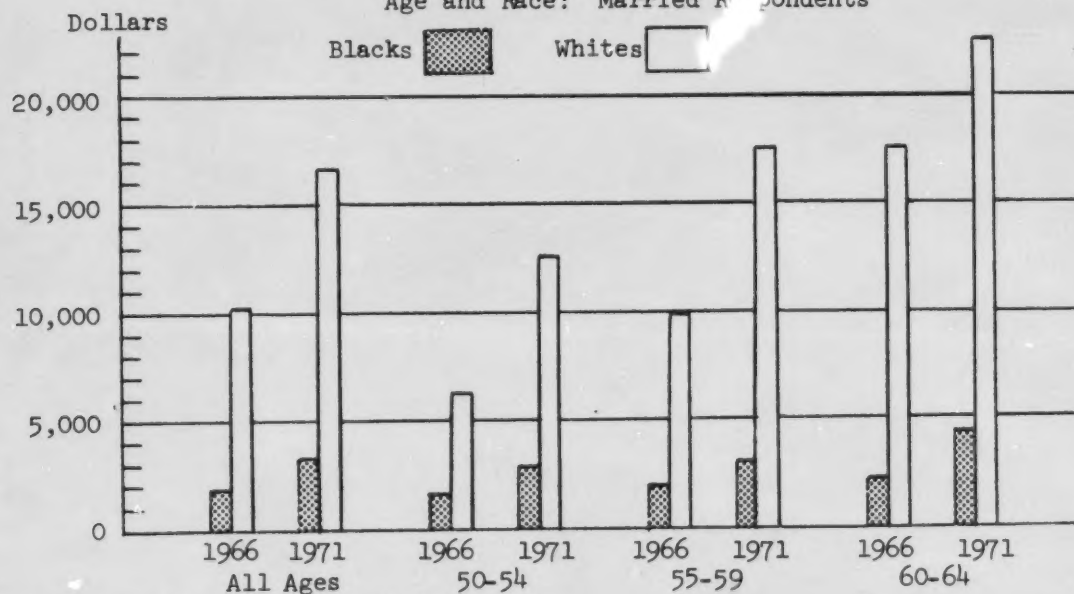
³⁷ Asset data for 1971 include the net value of automobile(s), which is not included in the data for 1966.

Chart 1.13 Mean Real Net Family Assets in 1971 Dollars, by Age and Race, 1966 and 1971: Married Respondents



Source: Appendix Table 1A-20.

Chart 1.14 Mean Real Per Capita Family Assets in 1971 Dollars, by Age and Race: Married Respondents



Source: Appendix Table 1A-21.

While economic rewards improved for those who were employed at each survey date, psychic rewards apparently did not. Smaller proportions of employed men reported that they liked their jobs very much in 1971 than had done so in 1966, although the proportion expressing dislike remained virtually as low as it had been in the earlier years.

The relative positions of blacks and whites were altered along several dimensions during the course of the five-year period. Largely for reasons related to health, black men were more likely than white men to leave the labor force, which caused the differential in participation rates in favor of whites to widen. For those who remained employed, however, there were evidences of slight relative improvements in the position of blacks. The ratio of black-to-white average hourly earnings improved slightly, and the ratio of annual earnings even more so.

Overall, the years between 1966 and 1971 do not appear to have been unkind to middle-aged men. The men themselves appear to have recognized this, for large majorities reported retrospectively that they had either progressed or at least held their own during the period. Averages, however, may conceal considerable variation, and it is clear that some men suffered serious reverses during the period. The factors accounting for variation in several significant facets of labor market experience will be examined in the ensuing chapters.

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CHAPTER II

EARNINGS AND EMPLOYMENT OF MIDDLE-AGED MEN: A SPECIAL STUDY OF THEIR INVESTMENT IN HUMAN CAPITAL

Arvil V. Adams*

This chapter is concerned with the study of human capital (the skills and knowledge of the individual) and its relationship to the distribution of earnings and employment of middle-aged men. More precisely, it is concerned with whether declining investment in human capital, with age, and ensuing skill obsolescence and depreciation can account for the special labor market problems of middle-aged men as reflected by the longer-than-average duration of their unemployment, when it occurs, and the general decline of their labor force participation and earnings with age. As such, this study joins a growing literature devoted to the understanding of changes in earnings and employment patterns with age.¹

Investment in human capital over the life cycle can be made in a variety of forms and institutional settings. The present study focuses on post-school participation in formal occupational training. A major purpose of the study is to examine the extent and character of this participation over the lifetime of these men, with particular emphasis on that which occurs during middle age. The study determines who among middle-aged men participates in formal occupational training and evaluates whether this participation helps to account for their

* Associate Professor of Economics, The University of Utah. I am especially grateful to my recent colleagues at the Center for Human Resource Research for their valuable comments and advice throughout the course of this study. Gilbert Nestel, Herbert S. Parnes, and Richard Shortlidge have been particularly helpful in this respect. A special debt of thanks is due Clarice Conger-Thompson for her computational assistance. Outside the Center others have contributed their time and advice. Among those deserving special attention are Dan Hamermesh, Garth Mangum, and Rose Wiener. Final responsibility for errors and omissions, however, remains my own.

¹ See, for example, Becker (1964 and 1967), Ben-Porath (1967), Clague et al (1971), Kreps (1963), Lydall (1968), Mincer (1957 and 1970), Morgan et al. (1962), Sheppard (1971), Sobel (1972) and Stoikov et al. (1973). In this and all footnotes citations refer to the bibliography which follows this chapter.

subsequent labor market experiences. Such an investigation is useful, not only in terms of testing certain aspects of human capital theory, but also in developing effective manpower programs and policies directed toward the economic and social needs of this population.

As in other chapters of this volume, the analysis is based upon data from the National Longitudinal Surveys for men who were 50 to 64 years of age in 1971. Along with other measures of the economic, social, and attitudinal characteristics of this population, respondents were asked about their participation in formal occupational training prior to the first round of interviews in 1966 and during the five-year longitudinal survey. For each training program respondents were asked to designate the occupation in which they had taken training, the institutional source of the training, and the duration of the program. In addition they were asked whether they had completed the training and if they used it on their current job. In the final survey respondents were also asked about their future training plans.

This information is used to examine the extent and character of participation in formal occupational training over the lifetime of these men. Participation during middle age is characterized by formal occupational training during the five-year survey period from 1966 to 1971. The analysis is restricted to members of the sample who were reinterviewed in 1967, 1969, and 1971 and whose current or last job during the survey week of each interview was as a wage or salary earner. The self-employed were excluded to overcome the difficulty of separating earnings received as returns to physical capital from those received as returns to human capital. An additional universe restriction excludes from consideration men who were not in the labor force for at least 35 weeks in the 12 months prior to the initial survey. Thus, the analysis is confined to men who manifested a commitment to the labor force at the outset of the study; its focus is upon what happens to the earnings and employment of these men over the five-year survey period and the relationship of this experience to participation in formal occupational training.

The study confirms that participation in formal occupational training by middle-aged men is both a cumulative and a selective process. Participation during middle age is found to be strongly correlated with previous training experience. Moreover, this participation is selective on the basis of formal education, age, occupation, and race. The evidence presented shows that the impact of investment in formal training on the earnings, unemployment, and labor force participation of white middle-aged men is marginal at best. In contrast, the effect is substantial for black middle-aged men, with training from company sources having a greater impact than training from alternative sources.

In Section I, which follows, a conceptual framework is developed for examining the relationship of investment in human capital to variations in earnings and employment of middle-aged men. Several

hypotheses derived from this framework are investigated with tabular analysis in Section II to identify who among middle-aged men participate in formal occupational training. Section III surveys the impact of this training on their subsequent labor market experiences using multiple regression analysis. And finally, in Section IV some concluding observations are offered concerning the adequacy of existing institutional responses to the training needs of middle-aged men.

I THE CONCEPTUAL FRAMEWORK

Human Capital Theory

Human capital theory² provides a useful interpretation of skill acquisition, its evolution over the life cycle, and its influence upon earnings and employment profiles. Within this framework individuals are treated as firms (Becker, 1967; Ben-Porath, 1967) combining their own human capital (HC) and time (T) with other market resources (R) in a production function to produce additions (Q) to their human capital stock:

$$Q = F(HC, T, R) \quad (1)$$

Efforts to enlarge the stock of human capital within a given period run into diminishing returns: each addition to the stock of human capital requires a larger amount of resources to produce, and thus costs more. The key to the rising cost of producing additional skills and knowledge within a given period is the opportunity cost of the individual's time in foregone earnings and the finite ability of each individual to absorb and effectively utilize additional investments in human capital. As a consequence, the marginal cost of producing human capital in Figure 1 slopes upward. On the other side of the issue, the marginal revenue of additions to the stock of human capital is the discounted stream of additional lifetime earnings attributable to the investment. The intersection of these schedules determines, for a given period, the optimal amount of investment in additional human capital.

Since the number of periods over which investment returns can be realized decreases with age, the benefits of investment at later stages of the life cycle decline. This decline, shown in Figure 1 as a movement from MR_1 to MR_2 , together with the upward slope of the marginal cost of producing human capital in each period yields a pattern of

²For a development of the theory and a survey of its literature see Mincer (1970).

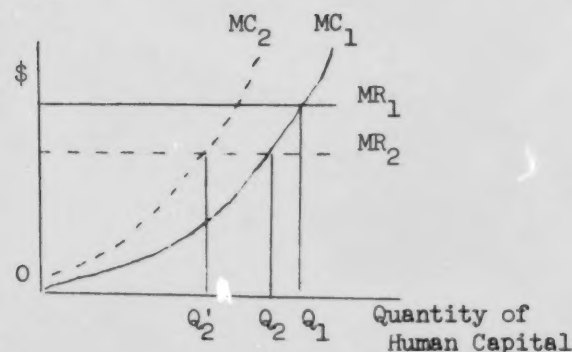


Figure 1

declining investment over the life cycle³ as illustrated in the movement from Q_1 to Q_2 . Because foregone earnings increase as a consequence of previous human capital accumulation, the shift upward of the marginal cost of producing additional human capital over the life cycle (MC_1 to MC_2) reinforces this pattern unless offset by increased efficiency of the larger stock in producing additional human capital.⁴

³Following Mincer (1970), the discussion at this point is in terms of gross investments. The predicted decline of gross investment, however, also applies to net investment if depreciation and obsolescence increase with age. This would also be true even if the rate of depreciation and obsolescence were constant. Stoikov (1973) has argued that investment need not decline throughout the life cycle. As long as the expected lifespan of a new skill is equal to or less than the expected working life of the individual, the decision to invest should be independent of age, other factors constant.

⁴This theoretical concept can be illustrated by the following specific example. The cost of additional training in foregone earnings would be greater for individuals after completing college than after completing high school, since a college graduate earns more on the average than a high school graduate. If, however, after completing college individuals were able to absorb the additional training more efficiently (in less time) than after completing high school, the difference in cost would be reduced or overcome altogether.

Stoikov (1973) contends that past investment may be complementary to subsequent investment. Instead of shifting upward with age, the marginal cost of producing additional human capital may actually shift downward. For support of this position see Shortlidge (in process), but also see Ben-Porath (1967).

Where an individual assumes the cost of investment--largely through foregone earnings--and receives the returns,⁵ the pattern of declining investment over the life cycle has implications for the shape of the age-earnings profile. The initial period of specialization in the production of human capital--identified with the period of schooling--is characterized by the general absence of earnings. During the post-school investment period, earnings begin to slope upward in a concave fashion as labor force activities begin to dominate, eventually reaching a peak and declining.

At a given level of experience, the age-earnings profile has a steeper slope for those with larger investments (Becker, 1964). Not only do earnings increase faster at higher levels of human capital investment, but the variance of earnings among those with different levels of investment increases with age. These implications of human capital theory have been verified in a variety of empirical studies (Lydall, 1968; Mincer, 1958; Morgan, 1962). Using the theory, it is possible to generate hypotheses about who among middle-aged men might be expected to participate in formal occupational training and the relationship of this training to their subsequent earnings and employment.

Hypotheses about Participation in Formal Occupational Training

To the extent that education and post-school formal occupational training are complementary, the marginal cost of investment in this training will shift downward with years of school completed. Additionally, if ability and years of school are strongly correlated (Becker, 1964), the shift downward will be intensified. It is therefore expected that the level of participation of middle-aged men in formal occupational training during the five-year survey period will increase with years of school completed. This is the first hypothesis.

Because the marginal revenue of investment in human capital is sensitive to the length of the investment period over which returns are realized, the second hypothesis is formulated as: the level of

⁵Becker (1964) distinguishes between general and specific forms of human capital investment. Characteristically, general training is a highly substitutable good with a market of considerable breadth; whereas, specific training, at the limit, is confined to a single market and usually to one firm. Individuals bear the cost of general training and realize the returns, while firms accept the cost of specific training and acquire the returns. Becker notes, however, that under selected conditions firms may "share" the returns to their investment in human capital with the individual in order to protect and preserve the investment.

participation of middle-aged men in formal occupational training during the survey period will decrease with age. For reasons given above, secular growth in years of school completed would reinforce this pattern.

Occupational position is correlated with education (Blau and Duncan, 1967). If, as suggested above, education and training are complementary, this doubtless will be reflected in the distribution of training across broad occupational categories. Moreover, certain occupations, by virtue of their human capital requirements, may be more sensitive to technological change than others. Hence, the expectation is that the level of participation of middle-aged men in formal occupational training during the survey period will be greatest among those in white collar and skilled occupations which are generally human-capital intensive. This is the third hypothesis.

If previous training is selective as indicated in the section which follows, this selectivity may have already identified those for whom the marginal cost of producing human capital is lowest. By the same token, the lack of previous training may shift the marginal cost of producing human capital upward with age more so than for those with previous training, particularly where formal occupational training is concerned. Absence from the classroom or from a formal training environment for an extended period of time may make subsequent training more difficult to assimilate. Finally, both previous and subsequent training may be complementary, yielding higher gross returns for those with previous training than for those without. The fourth hypothesis then is that middle-aged men with formal occupational training prior to the survey period will have a higher level of participation in formal occupational training during the survey period.

Human capital and physical capital may also be complementary (Colberg, 1964). If true, the regional distribution of the latter, which favors the non-South, would yield a similar distribution of investment in human capital. The rapid industrial development of the South during the sixties, however, was doubtless accompanied by a growing demand for additional training of the work force. Consequently, the fifth hypothesis is that the level of participation in formal occupational training of middle-aged men during the survey period is greater in the South than in the non-South.

According to the argument presented by Becker (1957), the "taste for discrimination" of employers, consumers, or employees as members of a nonminority group can lead to wage discrimination against members of a minority group in a selected occupation. Thus, the discounted stream of future earnings for members of the minority group in this occupation would be less than that of a nonminority group. Unless the cost of investment is reduced proportionately, the lower "return" would discourage investment by members of the minority group. Even with equal incentives to invest, however, overt exclusion of minorities might preclude such investment where control of entry to the institutional source of

investment is exercised (school segregation, etc.). By the same measure, where investments must be financed by the individual in the capital market, discrimination in this market against minorities would lead to lower minority investment vis-a-vis nonminority. Such financing is most likely to occur among those with low education, *ergo* low earnings. Thus, the final hypothesis is: to the extent that racial discrimination is a force in the labor market and in society as a whole, the level of participation in formal occupational training of middle-aged men will be lower among blacks than whites within similar education, age, and occupation categories, but relatively more so among those with the least education.

Hypotheses on the Economic Consequences of Participation in Formal Occupational Training

The development of these hypotheses is straightforward from the theory. First, it is expected that middle-aged men with formal occupational training prior to the survey period will show positive earnings and employment differentials associated with this training at the time of the initial survey, controlling for other relevant factors. Moreover, these differentials will in all likelihood vary by institutional source of training. Second, participation of middle-aged men in formal occupational training in the early part of the five-year period is expected to lead subsequently to larger increases in earnings than are experienced by men without such participation. Again, this may vary by institutional source of training.

As a third hypothesis, if previous training and subsequent training are complementary, as argued earlier, it is anticipated that the economic returns to participation of middle-aged men in formal occupational training during the initial surveys will be greater for those with previous training than for those without. Finally, reflecting racial discrimination, it is expected that economic returns to participation of middle-aged men in formal occupational training during the early portion of the five-year period will be greater for whites than for blacks.

II WHO AMONG MIDDLE-AGED MEN PARTICIPATES IN POST-SCHOOL FORMAL OCCUPATIONAL TRAINING?

Nearly half of the middle-aged men in the NLS sample had participated in one or more post-school formal occupational training programs at the time of the initial survey in 1966. Of this total, 18 percent participated in additional training from 1966 to 1969 and 13 percent from 1969 to 1971. The extent and character of this participation in each period is examined in this section in terms of the relationship of training to the level of education, age, occupation, and race. In addition, the nature of the training is described: its source, whether completed and used on current job, and to what occupation it related. Finally, the future training plans of these men are reviewed.

Training Prior to 1966

The extent of participation in post-school formal occupational training prior to 1966 is closely correlated with education, age, occupation, and race. As expected, among blacks and whites participation increases with educational attainment up to and including completion of four years of high school (Chart 2.1). Participation declines slightly among those with college experience, however. In each education group the participation of blacks is less than that of whites with the difference in relative terms largest among those with less than 8 years of school completed and smallest among those with exactly 12 years completed.

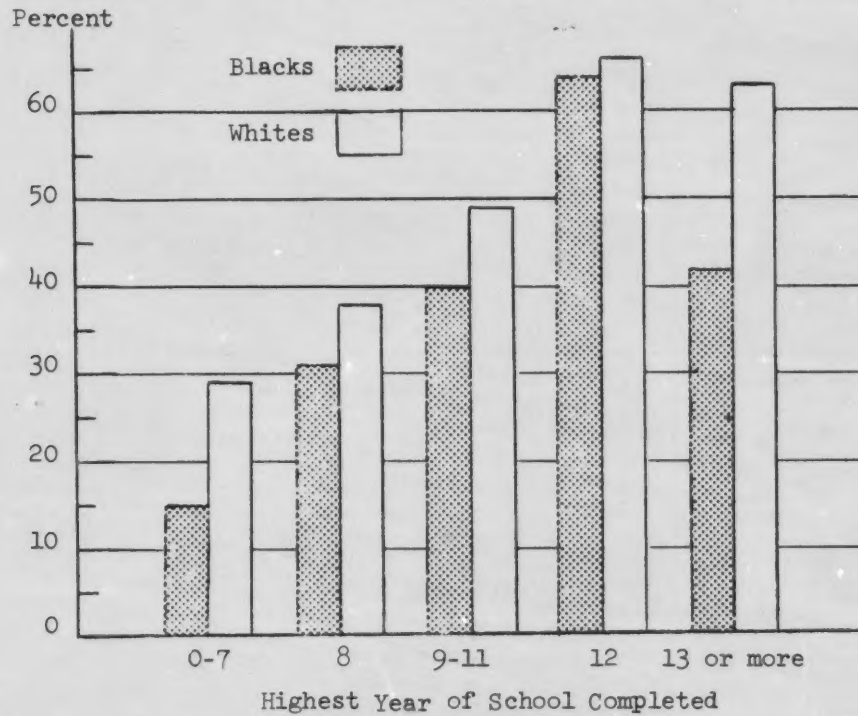
The persistent rise in educational levels historically, accompanied by the tendency toward greater formalization of training in recent decades, in all likelihood underlies the inverse relationship between age and extent of training evident among blacks and, to a lesser extent, whites (Chart 2.2). In each age group the participation of blacks is less than that of whites, with the difference both in absolute and relative terms largest among those 60 to 64 years of age. The lower rate of participation of blacks vis-a-vis whites observed by education and age is also evident by occupation where data are available for comparison (Chart 2.3). Among blacks and whites, participation in formal occupational training is greatest among white collar and skilled occupations.

Given the distribution of physical capital per worker, which favors the non-South, and the complementary nature of physical and human capital, it is not surprising to find participation in formal occupational training in the non-South prior to 1966 exceeding that in the South for whites and blacks (Table 2.1). This pattern varies, however, by education and occupation. The regional variation is greatest among those with less than eight years of school completed and those in blue collar or clerical occupations. For those with a high school education or more, or in managerial, professional and technical, or sales occupations, the variation all but disappears. Apparently, prior to 1966 to be educationally disadvantaged and living in the South, black or white, carried with it a double penalty in terms of subsequent participation in formal occupational training.

The bulk of the training that had been received by the men prior to 1966 was obtained in military service and through formal on-the-job training and apprenticeship (Chart 2.4). The latter category of on-the-job training and apprenticeship also includes vocational and technical training programs sponsored by social and government agencies, such as vocational rehabilitation and programs under the Manpower Development and Training Act. Tabulations not shown here indicate that among whites, four out of ten had received training from two or more institutional sources as compared with three out of ten blacks. More important perhaps is the evidence in Chart 2.4 that participation in

Chart 2.1

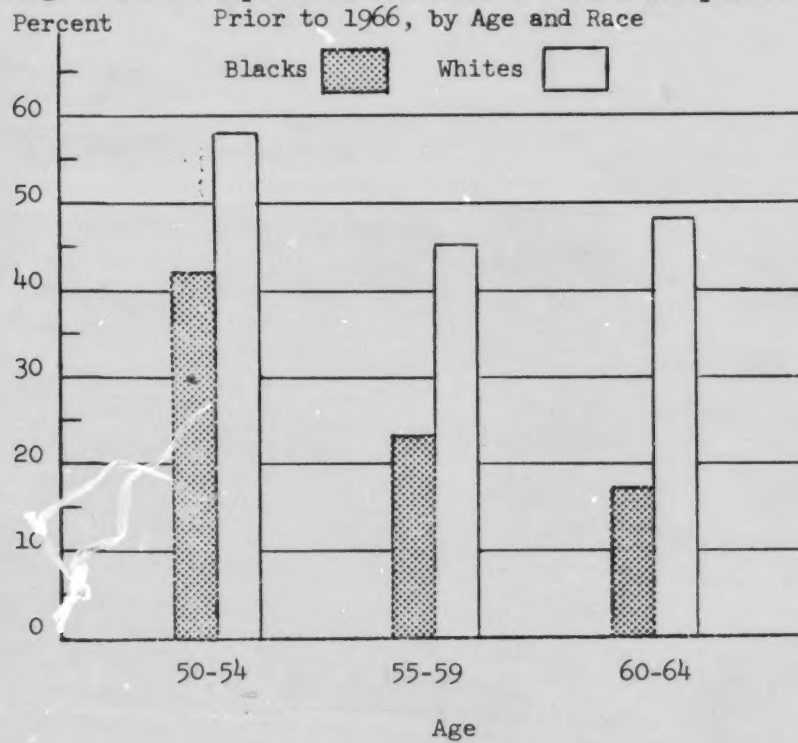
Percentage who Participated in Post-School Formal Occupational Training
Prior to 1966, by Highest Year of School Completed and Race



Source: Appendix Table 2A-1.

Chart 2.2

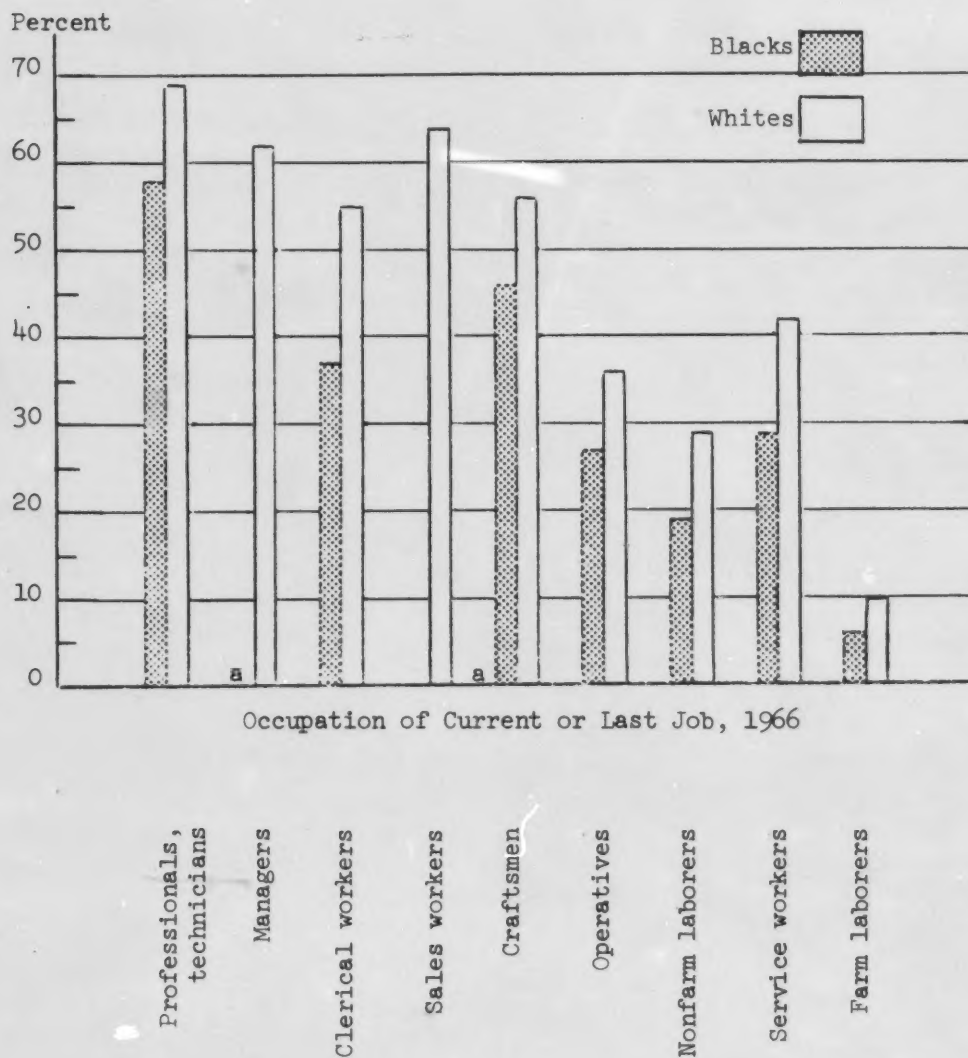
Percentage who Participated in Post-School Formal Occupational Training
Prior to 1966, by Age and Race



Source: Appendix Table 2A-1.

Chart 2.3

Percentage who Participated in Post-School Formal Occupational Training
Prior to 1966, by Occupation of Current or Last Job, 1966, and Race



a Percent not shown where base is less than 25 sample cases.
Source: Appendix Table 2A-1.

Table 2.1 Proportion Who Received Training Prior to 1966, by Region of 1966 Residence, Race, and Other Selected Characteristics^a

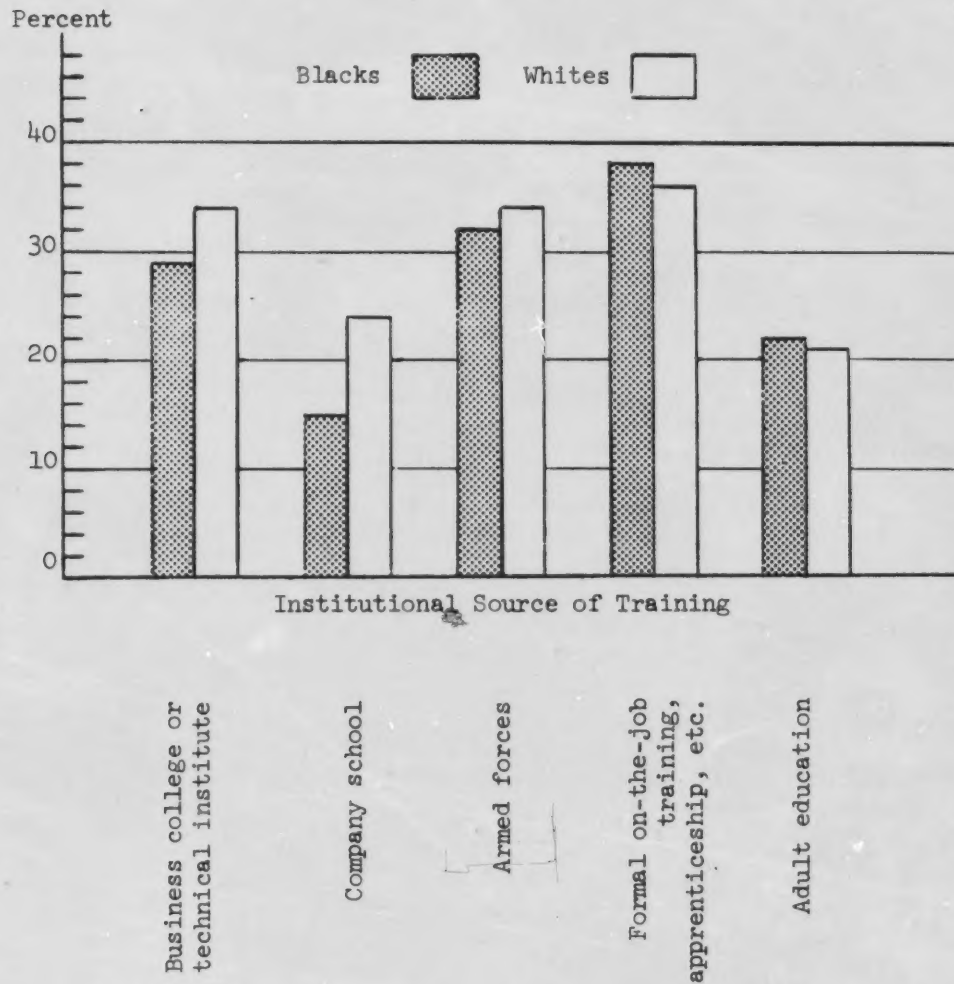
Characteristics	WHITES				BLACKS			
	South		Non-South		South		Non-South	
	Total number	Percent with training	Total number	Percent with training	Total number	Percent with training	Total number	Percent with training
<u>Total or average</u>	481	46	1,503	53	529	22	322	38
<u>Highest year of school completed</u>								
0-7	136	21	189	36	351	13	110	20
8	60	40	291	37	48	36	54	26
9-11	91	48	328	50	67	34	78	44
12	96	65	419	66	40	64	57	63
13 or more	97	63	273	63	21	b	22	b
<u>Age</u>								
50-54	202	48	600	62	187	33	129	52
55-59	148	44	538	46	204	16	114	33
60-64	131	46	365	49	138	15	79	21
<u>Occupation of current or last job, 1966</u>								
Professionals	67	69	153	69	15	b	10	b
Managers	78	62	188	61	7	b	4	b
Clerical workers	26	41	113	59	23	b	25	38
Sales workers	21	b	83	61	2	b	2	b
Craftsmen	124	47	427	58	69	35	51	58
Operatives	97	29	335	36	149	25	111	29
Nonfarm laborers	24	b	83	32	137	12	63	30
Service workers	24	b	92	45	68	20	52	39
Farm laborers	17	b	27	11	56	6	3	b

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

b Percent not shown where base represents fewer than 25 sample cases.

Chart 2.4

Percentage who Participated in Post-School Formal Occupational Training
Prior to 1966, by Institutional Source of Training and Race



Source: Appendix Table 2A-2.

company training schools (six weeks or more) and business and technical training is the major source of variation in formal occupational training between black and white middle-age men.

The relative disadvantage of blacks in terms of their participation in company training schools and business and technical training is reflected in their exclusion, for the most part, from preparation for salaried managerial, professional, and clerical occupations (Table 2.2). In instances where they did participate their training was heavily concentrated in skilled manual positions. The same pattern emerges when education is controlled (Table 2A-2). The vast majority of men, black and white, completed their training (Table 2.2). Generally, completion rates were highest among programs offered by the Armed Forces and company training sources. This finding is not unexpected given the nature of the former and the selectivity of the latter. The completion rate of blacks was below that for whites among the various programs, except for training received in business colleges and technical institutes.

Although respondents were asked to describe their most recent training program for each institutional source, a considerable part of the training doubtless had been taken years ago and by 1966 was either obsolete or rendered useless by job changes, e.g., vocational training in the Armed Forces. It is therefore significant to find much of the training among whites being used in the current or last job of 1966. Even among those with military training, one out of three was using the training in his current or last job. The racial differences by program, however, show that much of the training among blacks was underutilized especially in the category including formal on-the-job training and apprenticeship.

Training 1966 to 1971

The selectivity of training prior to 1966 in terms of education, age, and occupation continued, for the most part, during the period from 1966 to 1971 (Charts 2.5-2.7). In addition, controlling for these factors, participation of men in formal occupational training during middle age is strongly correlated with previous training experience. Middle-aged men with prior training were on the average twice as likely as those without to participate in additional training over the five-year period (Table 2A-3). Consequently, the gap between middle-aged men with training and those without widened even further over the survey period.

The relation of training to education, age, occupation and residence is consistent with the hypotheses outlined in Section I. Although not discussed here, these findings are also supported by multivariate analysis (Table 2A-12). The observed correlation of training during middle age with prior training is also consistent with expectations. Another dimension is the interaction of these variables with educational attainment. The importance of prior training to

Table 2.2 Selected Characteristics of Training Experience Prior to 1966, by Source of Training and Race^a

(Percentage distributions)

Characteristics of training experience	Business college or technical institute	Company school	Armed forces	Formal OJT, apprenticeship	General education
WHITES					
<u>Total number of respondents</u>	340	238	344	368	210
<u>Completed program</u>					
Total percent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Yes	72	92	89	81	76
No	24	3	4	14	16
Not ascertained	4	5	7	5	8
<u>Used on current or last job, 1966</u>					
Total percent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Yes	58	75	33	53	69
No	41	22	65	42	29
Not ascertained	0	3	2	4	1
<u>Type of program</u>					
Total percent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Professional	38	19	28	17	b
Managerial	5	23	3	5	b
Clerical	27	15	4	8	b
Skilled manual	27	34	48	60	b
Other	2	9	17	10	b
Not ascertained	1	0	0	0	b

(Table continued on next page.)

Table 2.2

Continued

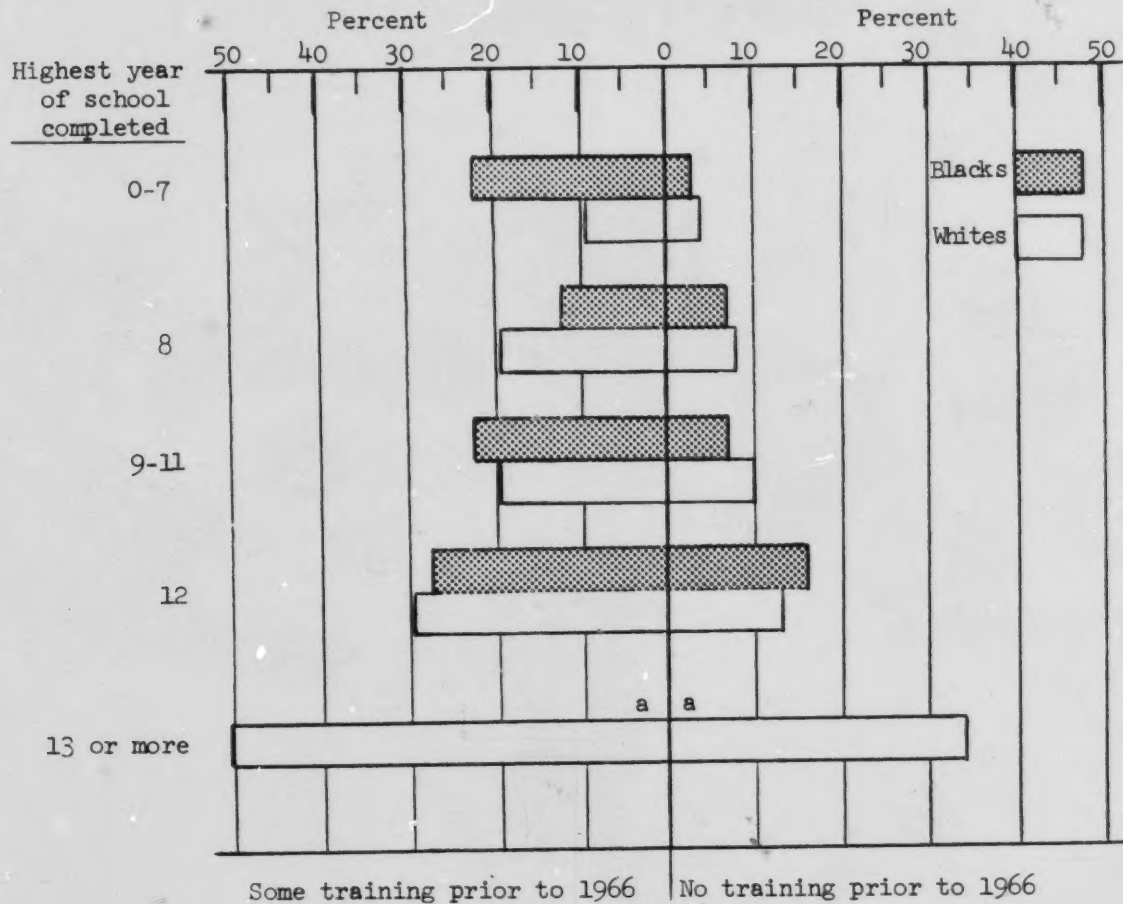
Characteristics of training experience	Business college or technical institute	Company school	Armed forces	Formal OJT, apprenticeship	General education
	BLACKS				
<u>Total number of respondents</u>	64	37	80	82	53
<u>Completed program</u>					
<u>Total percent</u>	100	100	100	100	100
Yes	80	83	83	62	66
No	16	10	15	36	32
Not ascertained	4	7	2	2	2
<u>Used on current or last job, 1966</u>					
<u>Total percent</u>	100	100	100	100	100
Yes	27	69	24	17	57
No	70	29	73	83	40
Not ascertained	3	2	3	0	3
<u>Type of program</u>					
<u>Total percent</u>	100	100	100	100	100
Professional	27	15	7	11	b
Managerial	3	7	0	3	b
Clerical	10	5	6	1	b
Skilled manual	56	63	62	72	b
Other	4	10	23	13	b
Not ascertained	0	0	2	0	b

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

b Not available by occupation.

Chart 2.5

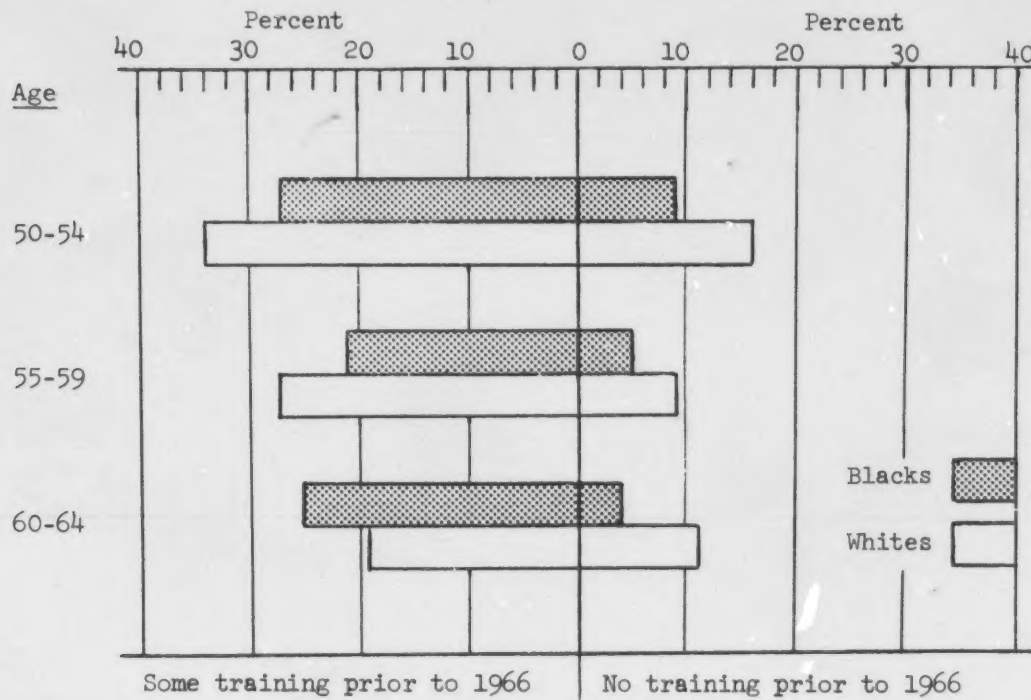
Percentage who Participated in Formal Occupational Training between 1966 and 1971, by Prior Training Status, Highest Year of School Completed, and Race



a Percent not shown where base is less than 25 sample cases.
Source: Appendix Table 2A-3.

Chart 2.6

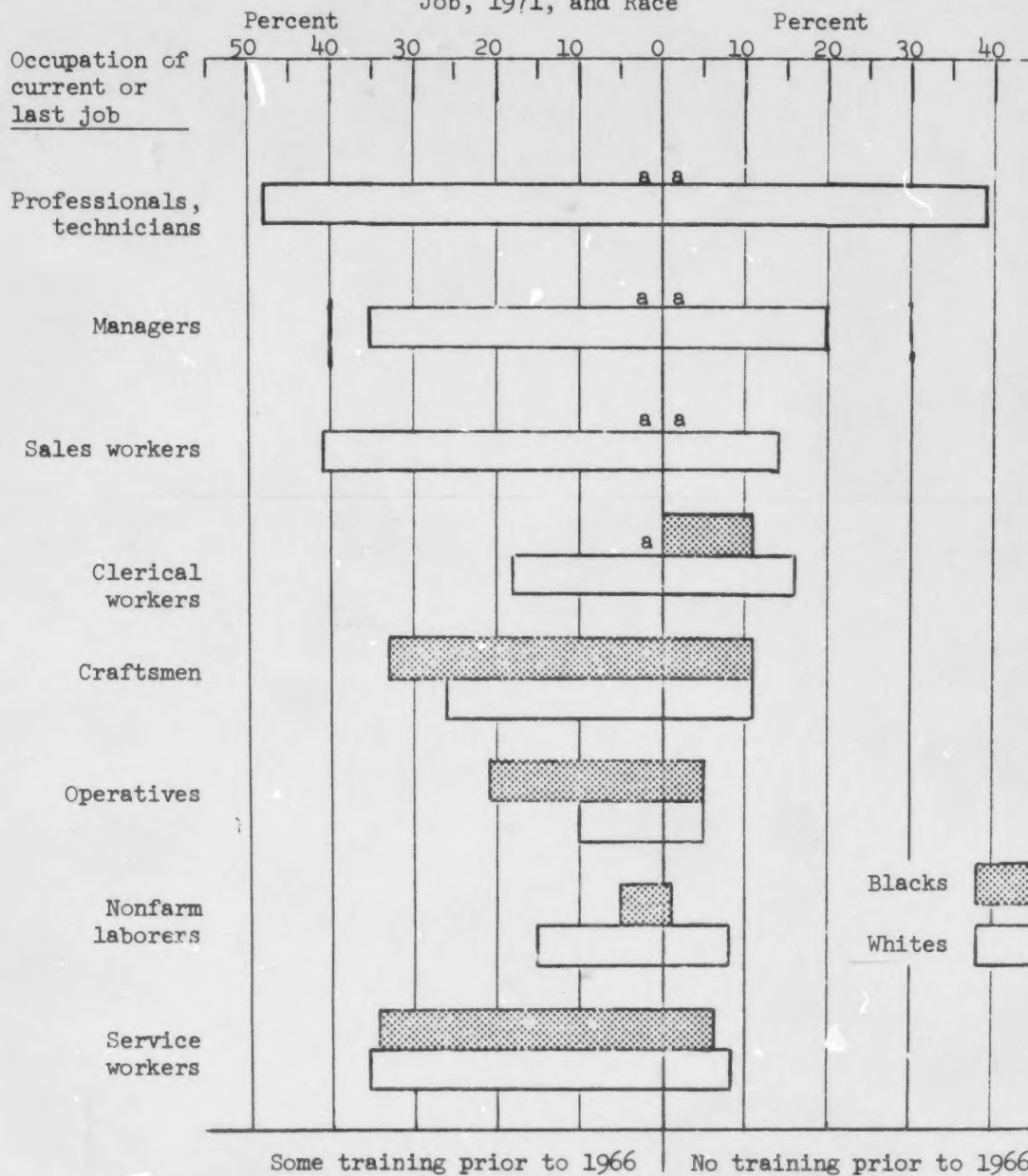
Percentage who Participated in Formal Occupational Training between 1966 and 1971, by Prior Training Status, Age, and Race



Source: Appendix Table 2A-3.

Chart 2.7

Percentage who Participated in Formal Occupational Training between 1966 and 1971, by Prior Training Status, Occupation of Current or Last Job, 1971, and Race



Source: Appendix Table 2A-3.

training during middle age is inversely related to the level of education (Chart 2.5). As a consequence, among middle-aged white men with college experience the likelihood of participation in formal occupational training is only slightly greater for those with prior training than those without. The regional distribution of training among middle-aged men was also consistent with expectations (Table 2.3). Although the regional distribution of physical capital per worker may still favor the non-South, the growth and development of the South during the last decade has doubtless stimulated the need for additional training in the region among middle-aged blacks and whites at all levels of education. Accordingly, the regional distribution of training prior to 1966, which favored the non-South, is now apparently shifting toward the South.

While the evidence is generally consistent with expectations, there is at least one important exception. The participation of black men in formal occupational training surpasses that of white in a number of education, age, and occupation categories. This finding may reflect the influence and selectivity of the vast array of manpower training programs during the sixties as well as the impact upon black employment of a tight labor market during the first three years of the longitudinal survey. The national labor market in the five-year period experienced a period of declining unemployment (1966-1969) followed closely by a period of rising unemployment (1969-1971). The characteristics of the participants in each period and of the programs provided show that the participation of middle-aged men in formal occupational training is sensitive to the state of the national economy. The results suggest that rising unemployment levels acted to depress (in relative terms) the amount of formal occupational training that goes to educationally disadvantaged black middle-aged men in semi-skilled operative and laborer occupations. The participation of whites, on the other hand, remained virtually unaffected (Table 2.4).

The racial differences can be linked to the changing character of training between the two periods. In the initial period, with declining unemployment, training resources were mainly allocated to training in (other) semi-skilled and unskilled occupations where blacks were already heavily concentrated (Table 2.4). For blacks and less so for whites this training declined in importance with rising unemployment. Resources were reallocated to training in managerial and professional occupations. The impact of this redistribution upon educationally disadvantaged blacks was apparently substantial. Among whites, training from company schools and other institutional sources (colleges, universities, special schools, etc.), while dominating both periods, grew in importance in the latter reflecting the shift to training in managerial and professional occupations (Charts 2.8 and 2.9). Despite this expansion, middle-aged black men were less likely than their white counterparts to receive company training of this type (Chart 2.8). Instead, blacks in this age group were turning in increasing numbers to other sources, including colleges and universities.

Table 2.3 Proportion Who Received Training 1966-1971, by Region of 1971 Residence, Race and Other Selected Characteristics^a

Characteristics	WHITES				BLACKS			
	South ^b		Non-South ^b		South ^b		Non-South ^b	
	Total number	Percent with training	Total number	Percent with training	Total number	Percent with training	Total number	Percent with training
<u>Total or average</u>	491	23	1,491	20	525	12	326	12
<u>Highest year of school completed</u>								
0-7	137	6	188	6	347	7	114	4
8	62	15	289	12	48	9	54	6
9-11	94	20	324	13	66	15	79	12
12	99	30	415	23	40	26	57	21
13 or more	98	48	272	43	22	c	21	c
<u>Age</u>								
50-54	199	32	602	26	188	15	128	19
55-59	155	20	530	17	199	10	119	9
60-64	137	15	359	15	138	11	79	4
<u>Occupation of current or last job, 1971</u>								
Professionals	66	48	156	45	15	c	14	c
Managers	81	28	208	30	12	c	6	c
Clerical workers	25	21	104	14	26	9	29	16
Sales workers	25	34	72	31	1	c	0	--
Craftsmen	138	23	422	20	79	22	54	16
Operatives	84	7	324	7	136	10	111	8
Nonfarm laborers	26	4	76	12	114	2	59	4
Service workers	29	19	94	17	88	11	50	18
Farm laborers	14	c	26	0	48	2	1	c

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

b Respondents for whom 1971 region of residence was not ascertained are excluded from the table.

c Percent not shown where base represents fewer than 25 sample cases.

Table 2.4 Selected Characteristics of Training Experience,
by Period during Which Training Was Received and
Race^a

(Percentage distributions)

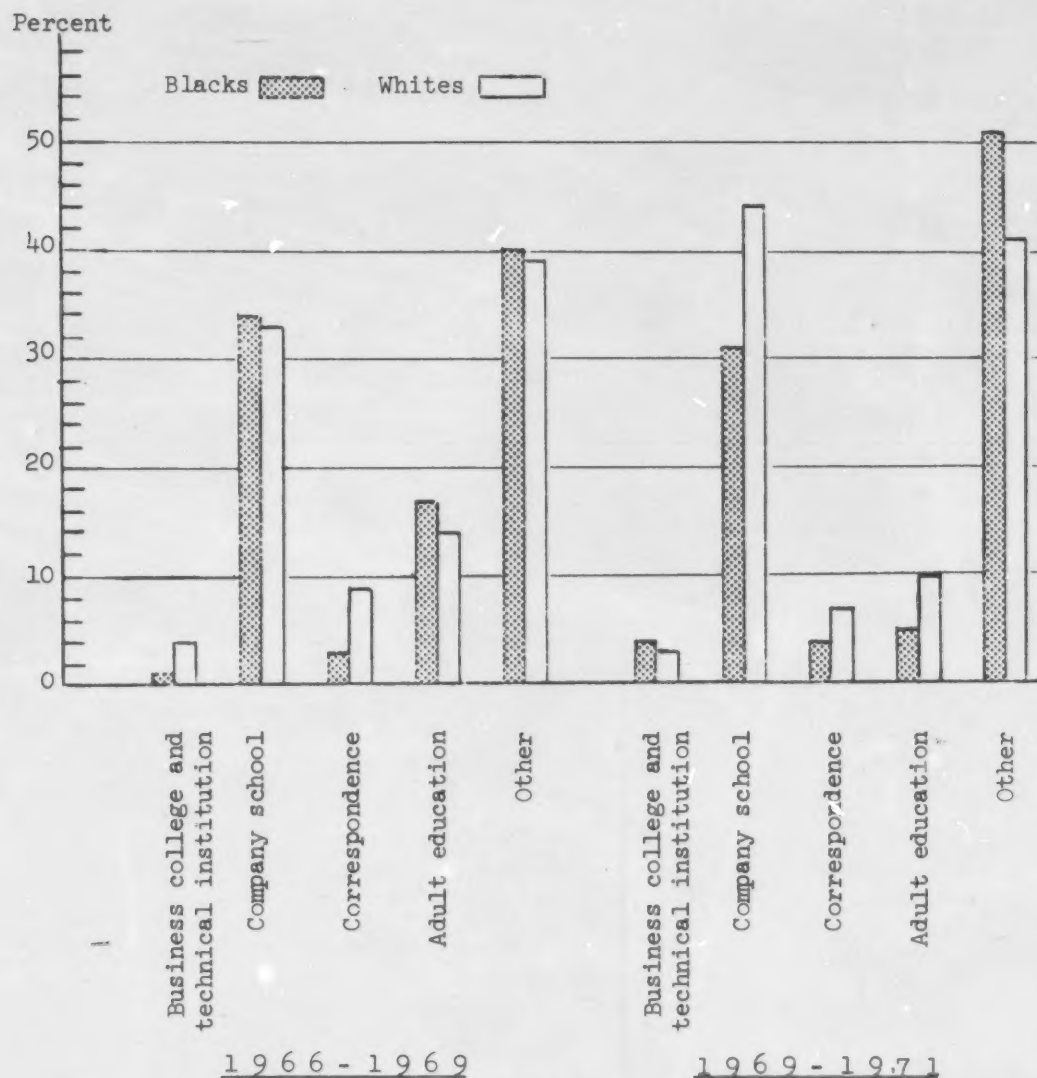
	WHITES		BLACKS	
	1966-1969	1969-1971	1966-1969	1969-1971
<u>Total number of respondents</u>	368	259	78	54
<u>Highest year of school completed</u>				
<u>Total percent</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
0-7	4	4	32	21
8	9	10	4	12
9-11	13	12	17	20
12	33	30	23	25
13 or more	40	44	23	23
<u>Occupation of current or last job^b</u>				
<u>Total percent</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Professionals	27	28	20	18
Managers	19	19	3	6
Clerical workers	6	5	8	6
Sales workers	9	6	0	0
Craftsmen	26	28	20	29
Operatives	6	6	22	14
Nonfarm laborers	2	2	5	4
Service workers	5	5	22	21
Farm laborers	0	0	0	2

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

b This refers to current or last occupation as of 1969 for the 1966-1969 training period and occupation as of 1971 for the 1969-1971 period.

Chart 2.8

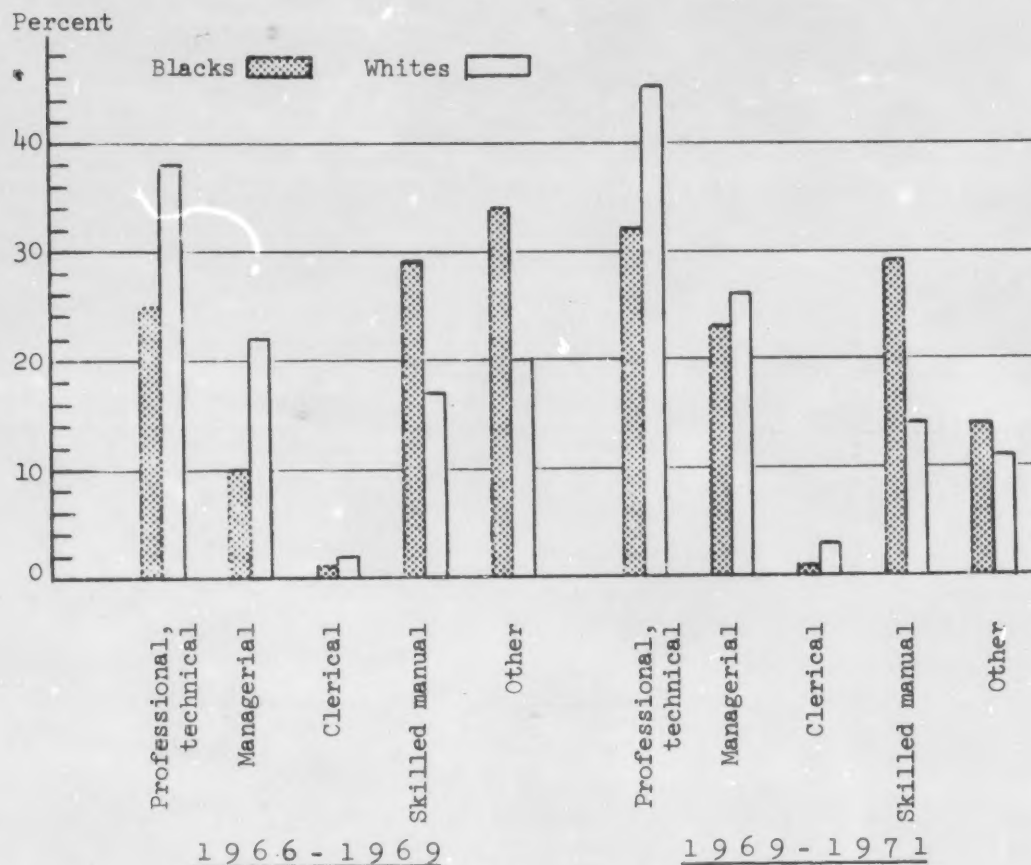
Distribution of Trainees According to Institutional Source, by Period
During Which Training was Received and Race



Source: Appendix Tables 2A-5 and 2A-6.

Chart 2.9

Distribution of Trainees According to Type of Training, by Period During which Training was Received and Race

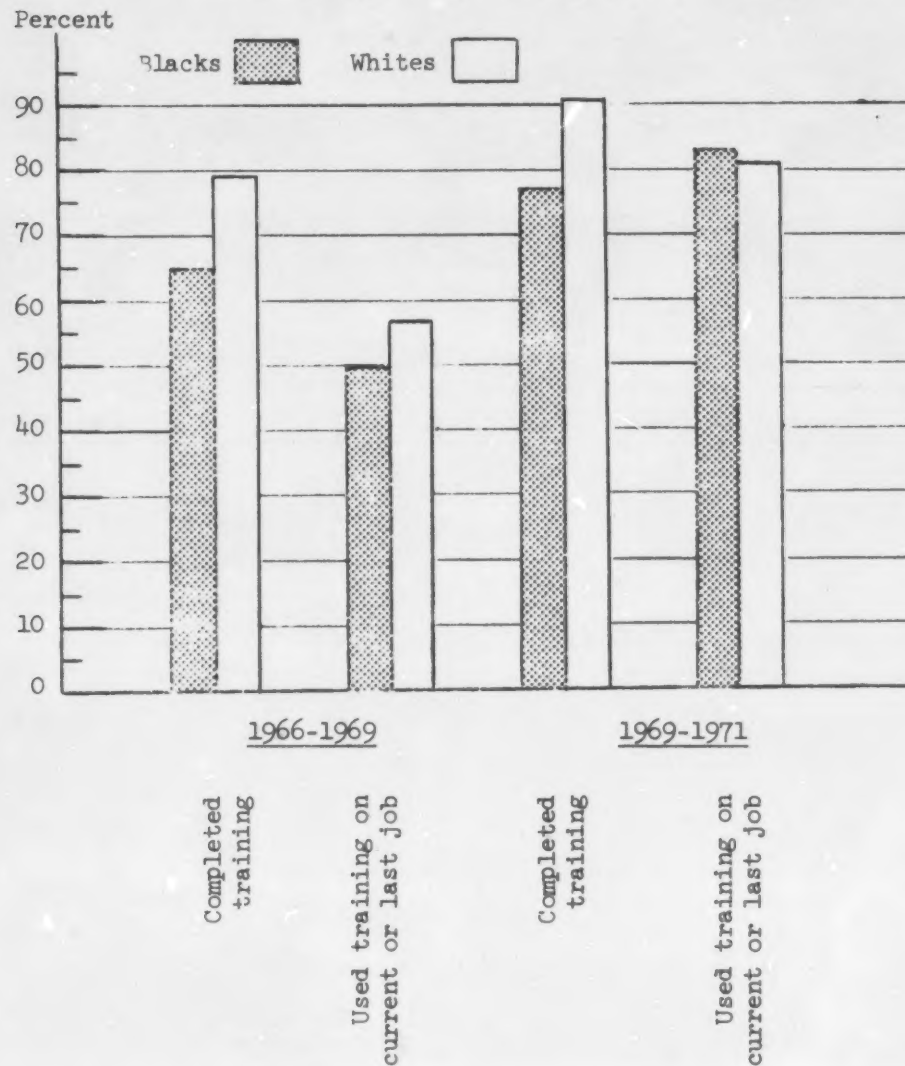


Source: Appendix Tables 2A-7, 2A-8, and 2A-9.

Among middle-aged men participating in formal occupational training during the survey period, the majority in each period had completed the training and found it useful on their current or last job (Chart 2.10). For example, eight out of ten men participating in training between 1969 and 1971 were using this training on their current or last job in 1971.

Chart 2.10

Percentage who Completed and Percentage who Used Formal Occupational Training 1966-1969 and 1969-1971, by Race



Source: Appendix Tables 2A-7, 2A-8, and 2A-9.

Future Training Plans

If future plans are accepted as an accurate indicator of the training that middle-aged men are likely to receive in the period subsequent to the surveys, their participation in formal occupational training will continue to decline with age.⁶ Moreover, the gap between those with training and those without will widen further. Seven percent of middle-aged men answered "yes" in 1971 when asked if they planned to participate in formal training courses or educational programs in the near future. Three percent responded "maybe" while the remainder, 90 percent, said "no." As expected, these answers varied by education, age, occupation, and by prior training experience (Table 2A-10).

Where data permit comparisons, the relation of future training plans to education, age, and occupation is consistent with earlier hypotheses. The most important predictor of participation in formal occupational training continues to be whether the respondent had prior training experience. Moreover, the strength of this relationship decreases with increasing chronological age. White men with training between 1966 and 1971 were 11 times more likely than those without training (22 versus 2 percent) to expect additional training in the future and the corresponding ratio among blacks was four to one (16 versus 4 percent) (Table 2A-10). This finding further confirms the cumulative nature of training.

III THE ECONOMIC CONSEQUENCES OF POST-SCHOOL FORMAL OCCUPATIONAL TRAINING

Whether the selectivity of participation in post-school formal occupational training by middle-aged men is of consequence to the distribution of their earnings and employment is dependent upon the impact of this training on their labor market experiences. This section examines the relationship of formal occupational training to the earnings and employment of these men, controlling for other relevant measures of productivity. Although concerned to some extent with the impact of training prior to 1966, attention is focused primarily on the effects of the training that occurred during the five-year longitudinal survey.

At the outset, the relation between training prior to 1966 and the 1966 distribution of earnings and employment is examined. Then,

⁶The inference of declining participation in formal occupational training with age is based upon the monotonically decreasing proportion of respondents participating in training or planning such participation at each of the three (albeit unequal) stages of the life cycle examined.

controlling for prior training experience along with other measures of productivity, training from 1966 to 1969 is examined for its impact upon earnings and employment in 1971. Interaction with prior training experience is also considered. The distributions of earnings and employment in 1971 are next compared with those in 1966, prior to the training experience, to evaluate the economic consequences of post-school formal occupational training during middle age.⁷

To evaluate the impact of post-school formal occupational training upon earnings and employment, the narrow school/post-school investment model of human capital theory is expanded to include other conventional measures of productivity expressed in dummy variables form (Table 2.5). The model includes as control variables: years of school completed (E), age (A), health (H), region of current residence (CR), occupation of current or last job (O) and tenure on current or last job (TN). Each of these variables, excluding health and tenure, has been shown in the previous section to be systematically related to participation in formal occupational training. Consequently, to the extent that these variables, as measures of productivity, also affect the earnings and employment of middle-aged men directly, their inclusion in the model removes the bias of estimated returns to training which would follow from their exclusion. For the same reason, health and informal on-the-job training as measured by tenure are included to account for alternative forms of investment in human capital.

As policy variables, the model includes measures of training prior to 1966 and training from 1966 to 1969 (Table 2.6). Each period is represented by dummy variables which distinguish whether a respondent participated during that period in formal occupational training which is used on the current or last job and, if so, the institutional source of the training (T_{66} , T_{66-69}). In cases where the respondent is not using the training or where information necessary to determine this by institutional source is absent, the respondent is classified as not

⁷Underlying the comparison is the assumption that if training exerts a positive influence upon the earnings and employment of these men, it should be reflected in improvement of their relative position within the distribution of earnings and employment compared at the two points in time, other factors constant. The technique has the advantage, as illustrated later, of accounting for the selectivity bias in training over and above that accounted for by other control variables. The merits of this technique are suggested in Somers and Stromsdorfer (1964).

Table 2.5 Classification of Control Variables

Category number	Age (A)	Years of school completed (E)	Health (H)	Current residence (CR)	Occupation of current or last job (O)	Tenure on current or last job (TN)
0	50-54*	0-8*	No limitations*	South*	Laborers (farm)*	Under 1*
1	55-59	9-11	Limits work	Non-South	Managers	1-4
2	60-64	12	Prevents work		Professionals	5-9
3		13+	NA		Sales workers	10-19
4					Clerical workers	20 or more
5					Craftsmen	NA
6					Operatives	
7					Laborers (nonfarm)	
8					Service workers	
9					NA	

* Denotes omitted category of variables in multiple linear regression.

Table 2.6 Classification of Training Variables^a

Category number	Training prior to 1966 used on current or last job (T ₆₆)	Training prior to 1966 used on current or last job (T ₆₆)	Training 1966 to 1969 used on current or last job (T ₆₆₋₆₉)
0	No training*	No training*	No training*
1	Business college or technical institute	Some training	Business college or technical institute
2	Company school	NA	Company school
3	Armed forces		Correspondence school
4	Formal on the job, apprenticeship, etc.		General education
5	General education		Other
6	NA		NA

* Denotes omitted category of variable in multiple linear regression.

a For detailed descriptions of the variables see the Glossary.

ascertained (NA).⁸ Training prior to 1966 is measured alternatively by collapsing the institutional sources of training into a single category identified as "some training" (T_{66}).

The economic consequences of participation in post-school formal occupational training (and human capital in general) are considered to include two separate, although interrelated, effects: the rate of compensation and the level of utilization. For purposes of estimating the model, the first is measured using the average hourly earnings (AHE), the second by weeks unemployed (WU) and weeks out of the labor force (WOLF). The coincident effect of these measures, in turn, is represented by the annual earnings of the respondent (Y). Evaluating the impact of training prior to 1966 upon the distribution of earnings and employment of middle-aged men in 1966, the model with annual earnings as a dependent variable appears as follows:

$$Y_{65} = \beta_0 + \sum_{i=1}^6 \beta_i T_{66i} + \sum_{i=7}^9 \beta_i E_{i-6} + \sum_{i=10}^{11} \beta_i A_{i-9} + \sum_{i=12}^{14} \beta_i H_{i-11} \\ + \beta_{15} CR_{15} + \sum_{i=16}^{24} \beta_i O_{i-15} + \sum_{i=25}^{29} \beta_i TN_{i-24} + \epsilon. \quad (2)$$

The model is repeated using as dependent variables: average hourly earnings, 1966; weeks unemployed last 12 months, 1966; and weeks out of labor force last 12 months, 1966.

Controlling for training prior to 1966, the impact of training from 1966 to 1969 upon the distribution of earnings and employment of middle-aged men in 1971 is examined with the model specified in interaction form. The model with annual earnings as a dependent variable is written:

$$Y_{70} = \beta_0 + \sum_{i=1}^2 \beta_i T'_{66i} + \sum_{i=3}^8 \beta_i T_{66-69i-2} + \sum_{i=9}^{20} \beta_i T'_{66} \cdot T_{66-69i-8} \\ + \sum_{i=21}^{23} \beta_i E_{i-20} + \sum_{i=24}^{25} \beta_i A_{i-23} + \sum_{i=26}^{28} \beta_i H_{i-25} \\ + \beta_{29} CR_{29} + \sum_{i=30}^{38} \beta_i O_{i-29} + \sum_{i=39}^{43} \beta_i TN_{i-38} + \epsilon. \quad (3)$$

⁸ Although the duration of training used on the job 1966 to 1969 is not considered directly, it has been examined elsewhere. Six out of ten respondents with training from business or technical schools or company sources between 1966 and 1969 and eight out of ten respondents with training from other sources had three or more weeks of such training.

As in (2) above, the model is repeated using as dependent variables: average hourly earnings, 1971; weeks unemployed 1969-1971; weeks out of labor force 1969-1971.⁹ By using an interaction term for prior training, it is possible to examine the relationship of 1966-1969 training to 1971 earnings and employment separately for respondents with prior training experience and those without.

Finally, equation (3) is used to account for the distribution of earnings and employment in 1966. The dependent variables are those used in equation (2) above. Health, occupation, and current residence are entered as of 1966. As such, the coefficients of training from 1966 to 1969 reflect the relative earnings or employment position of the trainee prior to his participation in formal occupational training. If this participation were randomly distributed or if the selectivity of training were accounted for in its entirety by the control variables included in the regressions, these coefficients would be zero. However, should either of these conditions not prevail, the coefficients would differ from zero either positively or negatively depending on the nature of the selectivity.

The coefficients of each model are estimated separately for blacks and whites using multiple linear regression analysis. Since each set of dummy variables is mutually exclusive, one from each is omitted in estimation (denoted by asterisks in Tables 2.5 and 2.6). For each set the regression coefficient of a given dummy variable can be interpreted as the net difference in the earnings or employment position due to a respondent's being in that particular category rather than in the category denoted by an asterisk. As a last step, equations (2) and (3) are also estimated with the natural log of annual earnings and hourly rate of pay as dependent variables. This follows from the assumption of a log-normal earnings distribution.

The Economic Consequences of Training Prior to 1966

The results of the regressions estimating equation (2) for blacks and whites show that age, highest year of school completed, health, region of current residence, and occupation of current or last job manifest their conventional relationships with the earnings and employment in 1966 of middle-aged men (Tables 2A-13 and 2A-14). While the proportion of the variance in earnings of these men explained by the model compares

⁹Unlike earlier surveys which accounted for weeks out of the labor force and weeks unemployed in the 12 months prior to each survey, the 1971 survey of middle-aged men recorded this information for the period between the 1969 and 1971 surveys. For a full description of all dependent variables see Glossary.

favorably with the findings of other studies, the results obtained for weeks out of the labor force and weeks unemployed are generally less than satisfactory. In all likelihood this is a consequence of the small variation in these measures resulting from the restriction of the universe to men who were in the labor force 35 weeks or more in the 12 months prior to the 1966 survey. Focusing on the net effects on 1966 earnings and employment of training received prior to 1966, the results show systematic relationships only with training from company sources and business and technical schools (Table 2.7).

The annual earnings of blacks and whites with training from business and technical schools prior to 1966 are significantly above those of their peers without prior training experience. Among blacks, for example, controlling for other productivity measures, those with training from business and technical schools prior to 1966 earned, on the average, \$1,472.00 more in 1965 than blacks without prior training experience. These results, moreover, suggest that the impact of this training for both groups, blacks and whites, is largely through compensation rather than utilization. That is, prior training experience generally is statistically significant only when earnings are considered as a dependent variable. For whites results similar to those obtained for business and technical schools are observed with training from company sources. However, with the exception of their training in business and technical schools, the earnings and employment of black middle-aged men in 1966 do not appear to be affected significantly by prior training experience. As suggested by the evidence to follow, however, these results, and perhaps those of cross-section results in general, are biased because of selectivity of each institutional source over and above that controlled for in the regression model.

The Economic Consequences of Training, 1966 to 1971

The estimation of equation (3) for blacks and whites in 1971 and again in 1966 yields results for the control variables which are not significantly different from those derived from estimation of equation (2) (Tables 2A-15 to 2A-18). Several findings deserve special attention, however. The regression results show that the relative earnings and employment position of the oldest group of men, those 60 to 64 years of age, deteriorated substantially over the five-year period. For example, the 1965 annual earnings of these men were approximately 8 percent below those of men 50 to 54 years of age, other factors constant¹⁰

¹⁰Using the log of 1965 annual earnings as a dependent variable (Tables 2A-13 and 2A-14) the regression coefficient of a given dummy variable approximates the percentage difference in earnings due to a respondent's being in that particular category rather than in the category of the variable which is omitted for comparison purposes.

Table 2.7 Net Earnings and Employment Differentials^a in 1966 Associated with Having Had Training Prior to 1966, by Institutional Source of Training and Race^b
(t-ratios)

Earnings and employment characteristics: 1966	Had some training prior to 1966 by institutional source				
	Business college or technical institute	Company school	Armed forces	Formal OJT, apprenticeship	General education
WHITES					
<u>Regressions 1966</u>					
1965 Annual earnings	1401 (4.16)***	927 (2.24)**	600 (1.24)	175 (0.51)	466 (1.11)
Log 1965 annual earnings	0.15 (4.05)***	0.16 (3.32)***	0.08 (1.45)*	0.08 (1.97)**	0.11 (2.23)**
1966 Average hourly earnings (dollars)	0.50 (3.35)***	0.50 (2.71)***	0.17 (0.80)	0.16 (1.06)	0.21 (1.07)
Log 1966 average hourly earnings	0.15 (4.10)***	0.15 (3.50)***	0.04 (0.71)	0.08 (2.08)**	0.09 (1.88)**
Weeks unemployed, 1965	-0.06 (-0.15)	-0.47 (-0.98)	-0.99 (-1.78)**	0.08 (0.19)	-0.29 (-0.57)
Weeks OLF, 1965	-0.10 (-0.64)	0.22 (1.13)	0.14 (0.62)	-0.04 (-0.25)	0.23 (1.14)
BLACKS					
<u>Regressions 1966</u>					
1965 Annual earnings	1472 (3.15)***	540 (1.19)	718 (1.36)*	- 39 (-0.07)	274 (0.66)
Log 1965 annual earnings	0.19 (1.50)*	0.03 (0.23)	0.18 (1.29)*	-0.06 (-0.40)	0.11 (1.00)
1966 Average hourly earnings (dollars)	0.43 (1.96)**	0.22 (1.02)	0.19 (0.76)	0.68 (2.79)***	0.37 (1.90)**
Log 1966 average hourly earnings	0.15 (1.47)*	0.07 (0.69)	0.05 (0.40)	0.30 (2.57)***	0.20 (2.09)**
Weeks unemployed, 1965	-0.09 (-0.06)	5.46 (3.65)***	-0.75 (-0.43)	8.38 (4.87)***	0.27 (0.20)
Weeks OLF, 1965	0.06 (0.11)	-0.19 (-0.37)	0.71 (1.22)	0.60 (1.02)	0.37 (0.81)

a Earnings and employment differentials are derived from the multiple regression results contained in Appendix Tables 2A-13 and 2A-14 and are net of the effects of the following variables used as regressors: highest year of school completed, age, health condition, region of residence in 1966, occupation of current or last job in 1966, and tenure on current or last job 1966.

b Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker, and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

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(Tables 2A-15 and 2A-16). In 1970, their earnings position had deteriorated to approximately 18 percent below the younger cohort (Tables 2A-15 and 2A-16). Also, by 1970, health as a factor preventing work and affecting earnings had become an important factor in the lives of these men.

Results obtained for training from 1966 to 1969 and its interaction with prior training experience provide new and unique insights into the selectivity of various types of training among middle-aged men and the impact of this training upon their earnings and employment. These results are summarized for blacks and whites in Tables 2.8-2.11. For whites, and to a lesser extent blacks, participation in formal occupational training during middle age is a highly selective process, even after controlling for prior training experience, age, education, occupation, and race. Moreover, this selectivity varies by institutional source of training. The data on earnings and employment among whites in 1966, for example, show that men with pre-1966 training who participated in formal occupational training from business and technical schools and company sources had above average annual earnings, other factors constant, even before this participation occurred (Table 2.8). In short, these participants were the "cream of the crop" (measured by annual earnings) and stand in sharp contrast to participants of other programs and to those who received none. Perhaps then it should not be surprising to find these men with above average earnings in 1971 after their participation in formal occupational training.

This finding is important because it illustrates the problem of selectivity bias in estimates of the impact of a training program based on cross-section data. It further suggests that a more relevant question in evaluating the effect of training on the earnings and employment of these men is whether the relative earnings and employment position of men who received training improved from 1966 to 1971, other things equal. A comparison of the relative earnings and employment positions of these men in 1966 and 1971 brings one to substantially different conclusions than might have been reached using only the 1971 cross-section results.

The relative earnings and employment position in 1966 of white middle-aged men with training prior to 1966 and additional training between 1966 and 1969 is not distinguishable from that in 1971. That is, their annual earnings in 1965, using company sources as an example, were approximately 10 percent above those of their peers with training prior to 1966 and no additional training between 1966 and 1969. This compares with 11 percent in 1970 (Table 2.8). After similar comparisons for other sources of training used by whites, both for those with and without prior training experience, the evidence suggests that the impact of formal occupational training during middle age on the earnings and employment of these men is marginal at best. This assumes, of course, following the theory developed in Section I, that the relative earnings position of these men should improve between the two periods. It further assumes that the minimum two-year period (1969-1971) following the training experience is sufficient for the observation of the economic returns to training.

Table 2.8

Net Earnings and Employment Differentials^a Associated with Training
 1966-1969 for White Respondents with Training Prior to 1966, by
 Institutional Source of Training^b
 (t-ratios)

Earnings and employment characteristics: 1966 and 1971	Institutional source of training 1966-1969				
	Business college or technical institute	Company school	Correspondence	General education	Other
<u>Regressions 1971</u>					
1970 Annual earnings	4708	1074	-1067	1186	-638
	(1.98)**	(1.71)**	(- 0.75)	(0.94)	(- 0.84)
Log 1970 annual earnings	0.29	0.11	- 0.16	0.06	- 0.03
	(1.32)*	(1.83)**	(- 1.23)	(0.50)	(- 0.43)
1971 Average hourly earnings (dollars)	1.22	0.54	- 0.49	0.74	- 0.19
	(1.17)	(1.93)**	(- 0.79)	(1.35)*	(- 0.58)
Log 1971 average hourly earnings	0.29	0.11	0.02	0.11	0.01
	(1.38)*	(1.83)**	(0.17)	(1.00)	(0.14)
Weeks unemployed 1969-1971	0.00	0.50	- 1.01	- 0.60	- 0.40
	(0.00)	(0.44)	(- 0.39)	(- 0.26)	(- 0.29)
Weeks OLF 1969-1971	0.77	0.20	2.74	5.12	1.14
	(0.15)	(0.14)	(0.88)	(1.85)**	(0.68)
<u>Regressions 1966</u>					
1965 Annual earnings	3958	992	-1337	325	-511
	(2.29)**	(2.20)**	(- 1.30)*	(0.36)	(- 0.94)
Log 1965 annual earnings	0.42	0.10	- 0.13	0.05	0.00
	(2.10)**	(2.00)**	(- 1.08)	(0.50)	(0.00)
1966 Average hourly earnings (dollars)	1.39	0.22	- 0.66	0.20	- 0.19
	(1.81)**	(1.10)	(- 1.43)*	(0.49)	(- 0.76)
Log 1966 average hourly earnings	0.34	0.06	- 0.13	0.06	- 0.05
	(1.89)**	(1.20)	(- 1.18)	(0.67)	(- 0.83)
Weeks unemployed 1965	- 0.41	- 0.57	0.98	- 0.34	- 0.43
	(- 0.21)	(- 1.10)	(0.82)	(- 0.32)	(- 0.68)
Weeks OLF 1965	- 0.43	- 0.15	- 0.40	0.94	0.10
	(- 0.54)	(- 0.71)	(- 0.85)	(2.24)**	(0.40)

(Table continued on next page.)

Table 2.8 Continued

- a Earnings and employment differentials are derived from the multiple regression results contained in Appendix Tables 2A-13 and 2A-15. Controlling for highest year of school completed, age, region of residence, occupation of current or last job, health, and tenure, these differentials represent the net difference in earnings and employment characteristics between respondents with training 1966-1969 and those without where both groups have some training experience prior to 1966.

The differentials are created by summing within each regression, by institutional source, the regression coefficients of training 1966-1969 and their interaction with training prior to 1966. The standard error of the sum of these coefficients is constructed from the variance-covariance matrix of the regression coefficients according to the following formula:

$$\text{Std. Error of } \beta_i + \beta_j = \sqrt{\text{Var}(\beta_i) + \text{Var}(\beta_j) + 2 \text{Cov}(\beta_i, \beta_j)}$$

- b Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker, and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 2.9 Net Earnings and Employment Differentials^a Associated with Training
1966-1969 for White Respondents with No Training Prior to 1966, by
Institutional Source of Training^b
(t-ratios)

Earnings and employment characteristics: 1966 and 1971	Institutional source of training 1966-1969				
	Business college or technical institute	Company school	Correspondence	General education	Other
<u>Regressions 1971</u>					
1970 Annual earnings	-1724 (- 0.45)	1382 (1.18)	- 59 (- 0.02)	228 (0.13)	- 251 (- 0.22)
Log 1970 annual earnings	- 0.04 (- 0.11)	0.19 (1.70)**	0.04 (0.13)	0.11 (0.63)	- 0.004 (- 0.04)
1971 Average hourly earnings (dollars)	- 1.16 (- 0.69)	0.25 (0.49)	- 0.59 (- 0.36)	- 0.20 (- 0.26)	0.72 (1.45)*
Log 1971 average hourly earnings	- 0.15 (- 0.46)	0.07 (0.70)	- 0.18 (- 0.54)	- 0.05 (- 0.34)	0.13 (1.31)*
Weeks unemployed 1969-1971	- 1.39 (- 0.20)	- 1.09 (- 0.51)	- 1.01 (- 0.15)	- 0.76 (- 0.23)	0.04 (0.02)
Weeks OLF 1969-1971	- 3.18 (- 0.38)	- 1.08 (- 0.42)	- 2.54 (- 0.31)	- 2.55 (- 0.64)	0.34 (0.13)
<u>Regressions 1966</u>					
1965 Annual earnings	-1311 (- 0.47)	2002 (2.35)***	83 (0.03)	-1302 (- 0.99)	1299 (1.57)*
Log 1965 annual earnings	- 0.13 (- 0.42)	0.20 (2.12)**	0.21 (0.69)	- 0.08 (- 0.55)	- 0.02 (- 0.24)
1966 Average hourly earnings (dollars)	- 0.43 (- 0.35)	0.62 (1.61)*	- 0.34 (- 0.28)	- 0.59 (- 1.00)	1.09 (2.92)***
Log 1966 average hourly earnings	- 0.06 (- 0.20)	0.17 (1.97)**	0.04 (0.14)	- 0.09 (- 0.64)	0.09 (1.01)
Weeks unemployed 1965	- 0.25 (- 0.08)	- 0.47 (- 0.47)	- 1.14 (- 0.36)	- 0.79 (- 0.52)	- 0.15 (- 0.15)
Weeks OLF 1965	- 0.30 (- 0.23)	- 0.31 (- 0.78)	- 0.51 (- 0.41)	0.57 (0.94)	- 0.14 (- 0.37)

(Table continued on next page.)

Table 2.9

Continued

- a Earnings and employment differentials are derived from the multiple regression results contained in Appendix Tables 2A-15 and 2A-17. Controlling for highest year of school completed, age, region of residence, occupation of current or last job, health, and tenure, these differentials represent the net difference in earnings and employment characteristics between respondents with training 1966-1969 and those without where both groups have no training experience prior to 1966.
- b White respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker, and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 2.10 Net Earnings and Employment Differentials^a Associated with Training
1966-1969 for Black Respondents with Training Prior to 1966, by
Institutional Source of Training^b
(t-ratios)

Earnings and employment characteristics: 1966 and 1971	Institutional source of training, 1966-1969				
	Business college or technical institute	Company school	Correspondence	General education	Other
<u>Regressions 1971</u>					
1970 Annual earnings	2862 (1.01)	1924 (2.85)***	-3006 (- 1.03)	274 (0.24)	458 (0.37)
Log 1970 annual earnings	0.73 (1.46)*	0.24 (2.00)**	- 0.22 (- 0.42)	0.13 (0.65)	0.01 (0.05)
1971 Average hourly earnings (dollars)	0.70 (0.48)	0.25 (0.71)	- 2.04 (- 1.35)*	0.11 (0.18)	- 0.06 (- 0.09)
Log 1971 average hourly earnings	0.28 (0.59)	0.08 (0.73)	- 0.39 (- 0.79)	0.11 (0.58)	- 0.03 (- 0.14)
Weeks unemployed 1969-1971	-13.60 (- 1.45)*	- 0.58 (- 0.26)	0.79 (0.08)	- 0.15 (- 0.04)	- 1.60 (- 0.39)
Weeks OLF 1969-1971	- 5.62 (- 0.41)	- 2.76 (- 0.84)	0.36 (0.03)	- 1.55 (- 0.28)	- 5.24 (- 0.86)
<u>Regressions 1966</u>					
1965 Annual earnings	- 308 (- 0.16)	161 (0.34)	2253 (1.08)	213 (0.26)	-584 (- 0.66)
Log 1965 annual earnings	0.20 (0.38)	- 0.03 (- 0.24)	0.65 (1.21)	0.11 (0.52)	- 0.19 (- 0.83)
1966 Average hourly earnings (dollars)	0.35 (0.39)	- 0.04 (- 0.18)	- 0.33 (- 0.35)	- 0.06 (- 0.16)	0.37 (0.93)
Log 1966 average hourly earnings	0.24 (0.55)	- 0.08 (- 0.80)	- 0.06 (- 0.13)	0.04 (0.24)	0.06 (0.32)
Weeks unemployed 1965	-10.31 (- 1.73)**	2.60 (1.82)**	- 6.74 (- 1.07)	- 1.65 (- 0.68)	- 1.01 (- 0.38)
Weeks OLF 1965	5.92 (2.73)***	0.85 (1.64)*	0.83 (0.36)	- 0.21 (- 0.24)	- 0.10 (- 0.10)

(Table continued on next page.)

Table 2.10

Continued

- a Earnings and employment differentials are derived from the multiple regression results contained in Appendix Tables 2A-16 and 2A-18. Controlling for highest year of school completed, age, region of residence, occupation of current or last job, health, and tenure, these differentials represent the net difference in earnings and employment characteristics between respondents with training 1966-1969 and those without where both groups have some training experience prior to 1966.

The differentials are created by summing within each regression, by institutional source, the regression coefficients of training 1966-1969 and their interaction with training prior to 1966. The standard error of the sum of these coefficients is constructed from the variance-covariance matrix of the regression coefficients according to the following formula:

$$\text{Std. Error of } \beta_i + \beta_j = \sqrt{\text{Var}(\beta_i) + \text{Var}(\beta_j) + 2 \text{Cov}(\beta_i, \beta_j)}$$

- b Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 2.11 Net Earnings and Employment Differentials^a Associated with Training
1966-1969 for Black Respondents with No Training Prior to 1966, by
Institutional Source of Training^b
(t-ratios)

Earnings and employment characteristics: 1966 and 1971	Institutional source of training 1966-1969				
	Business college or technical institute	Company school	Correspondence	General education	Other
<u>Regressions 1971</u>					
1970 Annual earnings	c	674 (0.67)	c	1340 (0.47)	1057 (0.85)
Log 1970 annual earnings	c	0.18 (1.03)	c	0.29 (0.56)	0.18 (0.80)
1971 Average hourly earnings (dollars)	c	0.14 (0.26)	c	0.56 (0.38)	0.50 (0.78)
Log 1971 average hourly earnings	c	0.16 (0.95)	c	0.28 (0.59)	0.17 (0.80)
Weeks unemployed 1969-1971	c	- 1.38 (- 0.42)	c	- 0.89 (- 0.09)	- 0.99 (- 0.24)
Weeks OLF 1969-1971	c	- 2.65 (- 0.55)	c	- 2.34 (- 0.17)	- 2.48 (- 0.41)
<u>Regressions 1966</u>					
1965 Annual earnings	c	1340 (1.99)**	c	626 (0.31)	- 283 (- 0.32)
Log 1965 annual earnings	c	0.26 (1.44)*	c	0.23 (0.43)	- 0.05 (- 0.20)
1966 Average hourly earnings (dollars)	c	0.72 (2.26)**	c	0.45 (0.49)	0.29 (0.72)
Log 1966 average hourly earnings	c	0.32 (2.11)**	c	0.29 (0.67)	0.14 (0.72)
Weeks unemployed 1965	c	0.19 (0.09)	c	0.23 (0.04)	4.79 (1.81)**
Weeks OLF 1965	c	- 0.33 (- 0.42)	c	- 0.43 (- 0.20)	- 0.54 (- 0.56)

(Table continued on next page.)

Table 2.11

Continued

- a Earnings and employment differentials are derived from the multiple regression results contained in Appendix Tables 2A-16 and 2A-18. Controlling for highest year of school completed, age, region of residence, occupation of current or last job, health, and tenure, these differentials represent the net difference in earnings and employment characteristics between respondents with training 1966-1969 and those without where both groups have no training experience prior to 1966.
 - b Black respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.
 - c Each respondent who obtained this source of training between 1966 and 1969 also received some training prior to 1966.
- ** Significant at $\alpha \leq .05$.
* Significant at $\alpha \leq .10$.

Certainly the latter assumption appears to be true among black middle-aged men with prior training experience. Among those with training from 1966 to 1969 in company schools, their relative earnings position improved substantially between 1966 and 1971. The annual earnings in 1965 of those with training from company schools were no higher than the earnings of those with training prior to 1966 and no additional training between 1966 and 1969 (Table 2.10). In 1970, however, the annual earnings of company trainees were approximately 24 percent above the same reference group. The earnings of those with pre-1966 training and training between 1966 and 1969 from other sources, while not significant, are suggestive of similar patterns except where correspondence schools are involved. As was found for whites, among black middle-aged men without pre-1966 training experience, participation in formal occupational training during middle age seems to have little, if any, positive effect upon the distribution of earnings and employment.

IV SOME CONCLUDING OBSERVATIONS

As a study of investment in human capital, this study has focused on post-school participation in formal occupational training. A major purpose of the study has been to examine the extent and character of this participation over the lifetime of a group of middle-aged men, with emphasis on that which occurs during middle age. The study sought to determine who among middle-aged men participates in formal occupational training and whether this participation helps to account for their subsequent labor market experiences. The decision to participate and its economic consequences were evaluated within the context of human capital theory. Generally, the findings were consistent with this theory although several important exceptions were observed.

As a study of investment in human capital, this research is unique in its ability to measure the flow of participation in formal occupational training over the life cycle of a single cohort of men. Consistent with the theory, the extent of participation in formal occupational training declines as these men age. Investment during middle age is found to be strongly correlated with previous training experience and to vary by education, age, occupation, and race. Prior training experience appears to be one of the most important factors influencing participation in formal occupational training during middle age. Beyond this, participation is relatively more common among men with 12 or more years of school completed, among younger members of the middle-aged population, among those in white collar and skilled occupations, and among whites.

Fluctuations in economic activity also appear to affect the character of formal occupational training, as training in semi-skilled operative and laborer occupations decline (in relative terms) with rising unemployment. The training of educationally disadvantaged blacks (with fewer than eight years of school completed), who already are heavily clustered in these occupations, suffers most as a consequence. Black

middle-aged men, in general, participate less in formal occupational training than do white. The level of education and occupational position of blacks are important factors underlying this differential. Controlling for these factors, however, a substantial part of the remaining variation is attributable to the relatively low participation of blacks in company training programs.

On the issue of whether declining participation in formal occupational training with age and ensuing skill obsolescence can account for the labor market problems of middle-aged men, the evidence is mixed. Participation in formal occupational training during middle age does not have a consistently positive effect on earnings and employment, as was expected. Instead, it varies according to prior training experience, institutional source of training, and race. Moreover, the results show that even after controlling for education, age, occupation, race and other measures of productivity, formal occupational training by institutional source is a highly selective process. The failure to control for this selectivity may lead to erroneous policy conclusions.

By using longitudinal data to evaluate the earnings and employment status of middle-aged men prior to their participation in formal occupational training and again afterward, it has been possible to control for this selectivity. The evidence suggests that the impact of formal occupational training during middle-age upon the subsequent labor market experiences of white men is marginal at best. In contrast, the effect was substantial for black middle-aged men, but only for those with pre-1966 training who participated in company training programs during the survey period. What remains to be determined, however, is whether the positive earnings experience of black middle-aged men is a consequence of their participation in formal occupational training or merely a result of improved employment opportunities for some blacks brought about by a period of sustained economic activity, intense civil rights demonstrations and enforcement of fair employment practices legislation.

The evidence presented herein does not provide overwhelming support for the economic value of formal occupational training during middle age. This is particularly true in view of the fact that the analysis has been confined to training that respondents have indicated is used on the job. While important in its own right, this finding should be carefully qualified.

Clearly, the evidence does not preclude the value of training to selected groups of middle-aged men or those of other age categories. Perhaps the desire to examine middle-aged men who were fully committed to the labor force at the outset of the survey has unduly restricted the universe to exclude those whose unemployment and labor force participation might have been improved with training. Another study of middle-aged men (Somers, 1968), for example, although not based on a national sample, has shown sizeable returns to training of the unemployed.

In focusing on the economic returns to formal occupational training for the individual, the study has not considered the possible economic benefits of training to the firm or to society at large. Both are important from a policy perspective. The absence of information about the economic benefits of training to the firm may be especially important where the firm assumes the cost of the investment rather than the individual. Finally, in evaluating the economic returns to training for the individual, if the study's evaluation period were extended beyond two years, perhaps a larger impact of training during middle age might be observed.

Notwithstanding its qualification, the evidence argues strongly for the need to review the conventional role of formal occupational training in American society and the adequacy of existing institutional responses to the training needs of middle-aged men. Subsequent analysis should be directed to the impact of formal occupational training upon the earnings and employment of selected groups of these men: the unemployed, those out of the labor force, and the educationally or culturally disadvantaged. The gap between black and white participation in company training programs should be examined carefully and the forces underlying this pattern identified. Special attention should be given to the training needs of middle-aged men without previous training experience. Of concern is whether the absence of this experience creates unnecessary institutional barriers to subsequent training of these men. Consideration of these issues is a key to further evaluating the importance of formal occupational training and the adequacy of existing institutional responses to the special labor market problems of middle-aged men.

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CHAPTER III
MIDDLE-AGED JOB CHANGERS

by

Herbert S. Parnes and Gilbert Nestel*

I INTRODUCTION

Middle-aged men typically hold jobs in which they have accumulated relatively long service. Of the men in the original sample who were employed at the time of the 1966 interview, three-fifths had served with their employers or in the same self employed status for at least 10 years, and a third had tenure of 20 or more years.¹ Since both age and length of service have an inhibiting effect on the likelihood that a man will change employers,² one does not expect a great deal of movement among the men in our sample over the five-year period covered by the data.

Nevertheless, about one-eighth of the wage and salary workers left their 1966 employers voluntarily, and it is of considerable interest to inquire into the circumstances under which these shifts took place and into some of their consequences. According to conventional economic theory, the voluntary movement of workers among jobs reflects their propensity to respond to more attractive alternatives. Workers are assumed to be mobile in the sense of being responsive to differentials in "net economic advantage," especially wage differentials. Since wage differentials signify the market's appraisal of the relative social importance of different jobs at the margin, when workers move toward higher paying jobs they are increasing their contribution to the social product. In other words, mobility is the process through which a competitive labor market achieves an optimum allocation of human resources at the same time that it permits the individual to maximize his own well being. Thus, interest in this subject stems both from a desire to examine the allocative efficiency of the labor market for this particular age-sex group of workers and from a concern for the degree to which the labor market actually serves the interests of the individual.

The focus of this study is on interfirm movement, that is, change of employer. One of its objectives is to measure the propensity of

* We wish to express our appreciation to Shu-O Yang and Randall H. King for their assistance in the preparation of this chapter.

¹Parnes et al. (1970), p. 141.

²Parnes (1970), p. 45.

middle-aged men to make interfirm job shifts and to analyze the factors associated with variations in the strength of this propensity. Second, it examines the extent to which propensity to move is associated with actual voluntary movement, and identifies the additional factors that are related to the likelihood of voluntary job change. A third objective is to assess whether the interfirm movement that has actually taken place over the five-year period of the study has contributed to the economic and psychological welfare of the individuals involved.

In the following section we present a conceptual framework for analyzing both the propensity to make a job change and the likelihood of an actual voluntary move. In Section III the propensity to change jobs is analyzed for men who were employed as nonagricultural wage and salary earners in 1966. The major purpose of this analysis is to identify the factors that are associated with variations in propensity to move and also to ascertain the degree of stability in this propensity over the five-year period of the study. Section IV is devoted to an examination of the voluntary job changes made by nonagricultural wage and salary workers during three time periods: 1966-1971, 1967-1969, and 1969-1971. As between the earlier and later two-year periods, the labor market loosened very substantially, and we are interested in assessing the effect of this change on the extent of voluntary movement.

Section V compares voluntary and involuntary job changers with men who remained with the same employer from the vantage point of changes in their earnings, job satisfaction, and unemployment experience. In this case, also, we make the analysis for the total five-year period as well as for the two two-year periods referred to above. The final section presents our summary and conclusions.

II. CONCEPTUAL FRAMEWORK

The term "mobility" is used in at least two rather different ways. In much of the economic literature on the theory of labor allocation and wage determination, mobility refers simply to the propensity of workers to respond to perceived differentials in economic advantage. However, since measures of propensity in this sense are very uncommon, the term "mobility" is often used to refer to actual job changing from which propensity to move has frequently been inferred. In order to avoid confusion, in this chapter we shall use the term "mobility" consistently to refer to actual job changing. The term "propensity" will be used to refer to the receptivity of an individual to attractive alternative job opportunities.

The likelihood that a worker will make a voluntary interfirm job change may be viewed as a result of his propensity to make such a move

and his opportunities for doing so.³ In the remainder of this section, we first present a model for the determinants of the propensity to move, following which we elaborate a model designed to explain actual movement.

Propensity to Move

We view the propensity of an individual to make a job change as his responsiveness to a perceived differential in "net economic advantage." Operationally, this is measured by means of a hypothetical question asked of all employed respondents both in the initial survey in 1966 and in the re-interview in 1971: "Suppose someone in this area offered you a job in the same line of work you are in now? How much would the new job have to pay for you to be willing to take it?" Each response is expressed as a percentage of the respondent's current average hourly earnings, and the resulting figure is taken as a measure of the relative attachment of an individual to his current employer or, what amounts to the same thing, of his readiness to move, given the perception of a similar job offering higher pay elsewhere. The distribution of the 1966 responses by nonagricultural wage and salary workers is shown in Table 3.1.

Table 3.1 Distribution of Responses to Hypothetical Job Offer
Question, by Race, 1966^a

(Percentage distributions)

Response	WHITES	BLACKS
Number of respondents	2,079	825
Total percent	100	100
Would take job at same or lower wage	14	14
Would take job at increase of 1-9%	4	4
Would take job at increase of 10-49%	32	34
Would take job at increase of 50+%	11	11
Would not take job at any wage	39	37

^a Respondents employed as wage and salary workers in nonagricultural employment.

³ A number of comparable formulations have been developed both by labor economists and organizational theorists. See, for example, Stoikov and Raimon (1968); Parker and Burton (1967); March and Simon (1958), Chapter 4.

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It should be observed that an unwillingness to move except at a very high wage rate, or indeed even a reported unwillingness to move at any wage rate, does not necessarily signify "uneconomic" or "irrational" behavior. Even if one accepts the hedonistic calculus that underlies conventional economic theory, a wage differential should produce a willingness to move only if its expected present value is large enough to exceed the (discounted) costs of moving, the latter including psychic as well as economic costs. While this admittedly seems to suggest that there will always be some wage that would justify a move, a categorically negative response to the question may be interpreted to mean simply that the respondent believes that no wage rate likely to be encountered would be sufficient to compensate the costs of movement.

As thus defined, propensity to move may be conceived to be a function of characteristics of the individual, characteristics of the job he holds, and characteristics of the labor market. The interaction of these sets of characteristics produces a level of satisfaction with current job (SAT) that is hypothesized to be inversely related to the worker's propensity to leave it. That is, the more positive the worker's attitude toward his job, the greater the psychic costs of a separation.⁴ However, although job satisfaction is related to propensity to move, the latter is not exclusively a function of the former. The characteristics of the worker, the work situation, and the labor market can combine to produce different propensities to move for workers with the same degree of satisfaction. For instance, a worker who places a high premium on security may be unwilling to sacrifice his seniority despite dissatisfaction with his job on other grounds, while an equally dissatisfied worker who is less concerned with seniority may have fewer reservations about leaving.

Propensity to move is expected to be inversely related to tenure in current job (TEN) both for economic and psychological reasons. First, long service provides a degree of protection against layoffs as well as advantages relating to such fringe benefits as vacation allowances and pension rights. In addition, it is reasonable to believe that the social and psychological bonds to a particular work place become stronger with the passage of time. In the context of the economic advantages deriving from tenure, we intend to test the effect of coverage by a private pension plan (PEN) on propensity to change jobs. Although pension plans have generally been referred to in the literature as an impediment to voluntary labor mobility, there has been remarkably little evidence with respect to their actual effect.⁵

Age (AGE) is expected to inhibit the propensity to move both because of the shorter payoff period for a job change as age increases and because

⁴Cf. March and Simon (1958), p. 94.

⁵See Parnes (1970), pp. 49-51; Folk (1967), p. 161.

the risks associated with a change probably increase with age as the result of typical employer hiring preferences. We expect the propensity to move to be inhibited also by the existence of health problems (HTH), since the risk of a leap into the unknown, which characterizes a job change under any circumstances, would seem to be more pronounced for men with impairments than for those enjoying good health.⁶

The condition of the labor market--specifically, the local area unemployment rate (UNP)--is also expected to influence a worker's propensity to change jobs. The reason for this expectation may not be obvious, since propensity has been defined as a disposition to take another job that is presumed to be available. However, the worker has no assurance that a particular job offer will be permanent, and his willingness to give up the job he has in order to accept another is likely to be influenced by his estimate of the availability of other opportunities. Therefore, propensity to move is expected to be inversely related to the local area unemployment rate. Also, we expect propensities to move to be higher in a year when the labor market is relatively tight (1966) than when the level of unemployment is higher (1971).

Finally, we introduce into the analysis the race of the respondent (RAC) and the occupation (OCC) and industry (IND) in which he serves not because we are prepared to offer hypotheses relating to these variables, but simply to ascertain whether there are racial, occupational, or industrial variations in propensity to change jobs.

Voluntary Movement

As has been said, the likelihood of a voluntary job change is dependent not only upon the worker's propensity to move, but on the opportunities for him to do so. These opportunities, in turn, are related to labor market conditions and to characteristics of the worker that measure the extent of his knowledge of alternative opportunities, his initiative and vigor in seeking them out, and his attractiveness to other employers.⁷ Our data permit us to develop only several measures of opportunity for movement. Some of these are variables that also reflect propensity to move: age, health, race, and local area unemployment rate. The relevance of each of these to propensity to make job changes has already been discussed. Age and being black are expected to bear an inverse relationship to the opportunity for movement because of the typical hiring preferences of employers. Health problems are also

⁶It should be noted that the hypothetical job offer question on which the propensity measure is based asks the respondent to consider a job in the same line of work.

⁷Cf. March and Simon (1958), pp. 100-06. In the March and Simon formulation it is the perceived ease of movement rather than the objective opportunities for movement that are referred to.

expected to reduce the opportunity for voluntary movement, since healthy men are more attractive to potential employers. The local area unemployment rate, of course, is an inverse measure of the availability of job opportunities.

* In addition to the foregoing variables that are conceptually linked to propensity and opportunity, there are three variables reflecting opportunities alone that we expect to be related to the likelihood of voluntary movement. One of these is the size of the labor force in the local labor market area (SLF), which we expect to be directly related to the likelihood of voluntary movement. The second is a measure of the relative attractiveness of the respondent to other employers; specifically, men whose educational attainment (EDU) is below average for their occupational category are expected to be relatively less attractive to other employers and thus less likely to make voluntary job shifts, other things being equal. Third, the likelihood of a voluntary job change is hypothesized to be negatively related to an individual's position in the wage structure (PAY), since those individuals whose hourly earnings are below average for their occupational category are, other things equal, more likely to encounter jobs with positive wage differentials than those whose current wage rates are about average or above.

The Models: A Summary

Let us now tie all the foregoing together in symbolic terms. The model of propensity to change jobs (P) that underlies the empirical analysis is as follows:

$$(3.1) \quad P = f(\text{SAT, TEN, PEN, AGE, HTH, UNP, RAC, OCC, IND})$$

Opportunity for movement (O) is represented as:

$$(3.2) \quad O = g(\text{AGE, HTH, RAC, SLF, UNP, EDU, PAY})$$

The likelihood of voluntary movement may be expressed, alternatively, as:

$$(3.3) \quad M = h(P, O)$$

$$(3.4) \quad M = i(P, \text{AGE, HTH, RAC, SLF, UNP, EDU, PAY})$$

$$(3.5) \quad M = j(\text{SAT, TEN, PEN, AGE, HTH, RAC, OCC, IND, SLF, UNP, EDU, PAY})$$

Since we do not have an independent measure of O, in the empirical work we shall estimate equations (3.1), (3.4), and (3.5).

Method of Analysis

The hypotheses outlined above will be tested by means of multiple classification analysis (MCA) in the following sections.⁸ The analysis of the propensity to change employers uses as the dependent variable the likelihood that a worker reports a willingness to change jobs for some specified wage rate.⁹ The MCA technique allows one to calculate for each category of a particular explanatory variable what the proportion of men with a propensity to change jobs would have been had the members of the category been "average" in terms of all of the other variables entering into the analysis. Differences in these "adjusted" proportions among the various categories of a given variable may be interpreted as indicating the "pure" effect of that variable upon propensity to change jobs, controlling for all of the other variables in the analysis. The dependent variable for the examination of actual job movement, analogously, is the likelihood of an individual's having made a voluntary job change between the two years in question. The criterion of a job change is being employed by different employers in the two years.¹⁰

III THE PROPENSITY TO CHANGE JOBS

In this section we first examine the factors associated with the propensity of middle-aged men¹¹ to change jobs as reflected in their

⁸The MCA formulation is more general than the more commonly specified multiple regression approach since it avoids the assumption of linearity between independent and dependent variables. The constant term in the multiple classification equation is the mean of the dependent variable. The coefficient of each category of every explanatory variable represents a deviation from this mean.

⁹In other words, responses to the hypothetical job offer question are dichotomized and coded in dummy variable form (1 = willingness to change jobs for some specified wage rate, 0 = unwillingness to change for any specified wage rate). We also have experimented with this variable expressed in continuous form, but the results have been less satisfactory.

¹⁰Individuals who moved from a wage and salary status in the base year to self employment in the terminal year are also treated as having made a job change. As in the case of propensity to move, the dependent variable is coded as a dummy (1 = different employers, 0 = same employer). It should be noted that an individual who left his base year employer but returned by the terminal year would be treated as not having made a change. Also, an individual may have made more than one change of employer during the period. If so, the criterion for classifying the change as voluntary or involuntary is the reason for having separated from the base year employer. All separations other than layoffs and discharges are classed as voluntary.

¹¹The analysis is confined to those who were employed as wage and salary workers in nonagricultural industries.

responses to the hypothetical job offer question in the 1966 survey. Following this, the 1966 propensities are compared with those registered in the 1971 survey for that subset of the sample who were employed in the same firm, in the same three-digit occupational category, and in the same local labor market area at both points in time.

MCA Results: 1966 Propensity

Most of our hypotheses concerning the propensity to change jobs are supported by the data in Table 3.2. Tenure in job, age, and degree of job satisfaction are all strongly related in the expected direction to the propensity to change, and in all three cases the relationship is monotonic. Coverage by a pension plan also exercises a strong independent effect on the propensity to change jobs. The proportion of covered men who manifest a propensity to change jobs is about 5 percentage points lower than that of those not covered by pensions. Contrary to expectation, neither health condition nor local area unemployment rate is related to the disposition to change jobs. Nor does there appear to be a racial difference in the propensity to move.¹²

There are occupational and industrial differences in the propensity to change jobs. Professional workers have above average propensities to be responsive to wage differentials: the adjusted proportion of professional workers manifesting a propensity to move is about 10 percentage points higher than for operatives or service workers. Men in the construction industry have the highest propensities to change employers and men in the mining the lowest, with almost a 20 percentage point spread between these two categories. Also, men in transportation and utilities and those in finance, insurance, and real estate have somewhat below-average propensities to change jobs.

Comparison of Propensities: 1966 and 1971

Table 3.3 provides a summary of the 1966 and 1971 MCA results for men who did not change their three-digit occupational category or employer and who resided in the same local labor market area at the two points in time. By focusing on this group, we minimize the effect of changes in the character of the job on the propensity to move. The principal causes of change over the five-year period will be those attributable to the aging of the men and the consequent increase in their tenure, as well as the substantial change in economic climate between

¹²In analyzing both propensity to change jobs and actual mobility we began our analysis of the influence of race by stratifying the sample and running separate MCAs for blacks and whites in order to ascertain whether race interacted with the other explanatory variables--i.e., whether the slopes of the explanatory variables differed between the two groups. Finding that they did not, we have simply introduced race as a variable in analyzing the pooled data.

Table 3.2 Unadjusted and Adjusted^a Proportions of Respondents^b with Propensity to Change Jobs, by Selected Characteristics, 1966

Characteristic	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
<u>Total sample</u>	3,158	63.1	63.1	8.49**
$\bar{R}^2$	0.075			
<u>Race</u>				0.0001
Whites	2,251	63.0	63.1	
Blacks	907	64.4	63.2	
<u>Age (1971)</u>				14.70**
50-54	1,242	68.5	67.6	
55-59	1,110	63.4	63.3	
60-64	806	54.7	56.3	
<u>Health condition^c</u>				0.39
Health affects work	596	63.8	62.9	
Health does not affect work	2,554	63.0	63.2	
<u>Tenure in current job^c</u>				23.14**
Less than 1 year	379	79.4	76.2	
1-5 years	591	74.6	72.5	
6-9 years	350	68.2	67.5	
10-14 years	455	65.3	65.3	
15 years or more	1,361	51.9	53.8	
<u>Pension coverage^c</u>				5.35**
Covered by employer plan	1,848	59.5	61.0	
Not covered by employer plan	1,206	68.7	66.4	
NA or "don't know"	104	71.8	68.1	
<u>Job satisfaction^c</u>				13.35**
Likes job very much	1,755	58.6	59.1	
Likes job somewhat	1,145	67.6	66.9	
Dislikes job	236	77.0	76.4	
<u>Occupation^c</u>				2.13*
Professionals	279	69.1	71.3	
Managers	342	58.8	63.6	
Clerical workers	199	52.6	56.8	
Sales workers	131	66.9	65.7	
Craftsmen	788	64.3	62.8	
Operatives	794	62.1	61.5	
Nonfarm laborers	342	67.2	62.2	
Service workers	274	64.3	61.3	

Continued on next page.

Table 3.2 continued

Characteristic	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
<u>Industry^c</u>				2.34*
Mining	44	52.3	51.2	
Construction	376	74.1	70.1	
Manufacturing	1,183	62.8	63.7	
Transportation and utilities	388	52.2	57.4	
Trade	403	65.3	63.9	
Finance, insurance, real estate	115	56.8	58.1	
Services	373	67.6	63.0	
Public administration	269	61.5	63.5	
<u>Unemployment rate in local area^c</u>				2.04
Less than 3.0 percent	579	67.0	66.7	
3.0 - 3.9 percent	1,095	61.4	61.7	
4.0 - 4.9 percent	615	61.5	61.1	
5.0 percent or more	869	64.0	64.1	

* Significant at $\alpha \leq .05$.

** Significant at $\alpha \leq .01$.

a Adjusted for the effects of all the variables shown in the stub of the table. For method of adjustment, see text.

b Analysis confined to respondents employed as nonagricultural wage and salary workers in 1966.

c The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.

1966 and 1971, reflected in an increase in the overall unemployment rate from 3.8 percent to 5.9 percent.¹³

The relationships shown in Table 3.3 are, as one would expect, fairly similar to those that have been described earlier (Table 3.2), although there are several exceptions.¹⁴ Health condition becomes significant in 1971, but in the opposite direction from that which was hypothesized. Tenure is less highly significant in 1971 than in 1966, and in neither case is the relationship with propensity to change jobs perfectly monotonic. Pension coverage loses its statistical significance in 1971. Occupational and industrial differences in propensities are not statistically significant, except for the former in 1971.

The chief value of the data in Table 3.3 is what they indicate about the propensities to change jobs in 1971 relative to 1966. Overall, the proportion of the men who manifested a willingness to change employers in 1966 was 59 percent. By 1971 this proportion (for the same men) had dropped to 41 percent, a decline of 18 percentage points. Some decline would, of course, be expected on the basis of the increased age of the sample as well as its greater tenure. However, it should be noted that the maximum cross-sectional difference between any two contiguous five-year age categories in either 1966 or 1971 is 10.5 percentage points. On the other hand, the decrease between 1966 and 1971 in the proportion of men indicating a propensity to change jobs within each tenure category ranges from 13 to 28 percentage points. Thus, it does not seem likely that the overall decline in propensity to move can be entirely explained by the aging of the sample. We believe that part of the decline reflects the influence of the looser labor market in 1971 on the disposition of men to contemplate a job change.

IV VOLUNTARY JOB CHANGES

We turn our attention now to an examination of the factors associated with the actual job changes that occurred between 1966 and 1971 and in the two subperiods 1967-1969 and 1969-1971.

The Five-Year Period: 1966-1971

Data on interfirm movement over the five-year period are analyzed in two ways. Table 3.4 presents the MCA results for equation (3.4), in

¹³U.S. Department of Labor (1973), p. 127.

¹⁴It will be noted that the proportion of men with a propensity to change jobs in 1966 is somewhat smaller than what is shown in Table 3.2. The reason is that men who actually changed employers between 1966 and 1971 are excluded from Table 3.3, but included in Table 3.2. These men were presumably among those with the highest propensities to move.

Table 3.3 Unadjusted and Adjusted^a Proportions of Respondents^b with Propensity to Change Jobs, by Selected Characteristics, 1966 and 1971

Characteristic	1966			1971				
	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio	Number of respondents	Unadjusted percent	Adjusted percent ^a	F-ratio
<u>Total sample</u>	1,087	59.0	59.0	3.27**	1,087	41.3	41.3	3.08**
<u>R²</u>	0.065			0.06	0.059			1.08
<u>Race</u>								
Whites	790	59.2	59.0		790	41.4	40.9	
Blacks	297	56.9	57.8		297	41.3	46.3	
<u>Age (1971)</u>				10.92**				11.34**
50-54	466	66.3	65.8		466	50.1	49.0	
55-59	384	57.0	57.8		384	37.2	38.5	
60-64	237	48.7	48.5		237	31.8	32.0	
<u>Health condition</u>				1.55				5.07*
Health affects work	180	63.5	62.9		174	49.2	48.6	
Health does not affect work	907	58.0	58.1		913	39.7	39.9	
<u>Tenure in current job^c</u>				5.06**				2.57**
Less than 1 year	47	69.5	67.9		3	e	e	
1-5 years	150	72.0	68.3		84	43.3	40.8	
6-9 years	125	69.4	66.2		106	53.3	53.0	
10-14 years	177	63.2	63.7		158	42.9	42.6	
15 years or more	582	51.0	52.6		736	38.8	39.2	
<u>Pension coverage</u>				4.24**				0.20
Covered by employer plan	729	56.2	56.4		823	40.6	40.9	
Not covered by employer plan	331	64.4	64.0		231	44.1	43.1	
NA or "don't know"	27	75.2	75.3		33	41.8	39.5	
<u>Job satisfaction^c</u>				4.29**				8.43**
Likes job very much	638	55.3	55.6		485	36.9	36.0	
Likes job somewhat	380	62.6	61.6		529	42.2	42.9	
Dislikes job	62	73.3	65.8		72	63.8	64.6	

continued on next page

Table 3.3 continued

Characteristic	1966					1971				
	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio		Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio	
Occupation ^c				1.61					3.03**	
Professionals	86	71.5	72.4			86	53.4	55.0		
Managers	146	58.9	62.2			146	43.7	48.3		
Clerical workers	63	48.6	54.3			63	30.5	32.7		
Sales workers	41	64.1	61.9			41	38.9	37.6		
Craftsmen	267	55.4	55.4			267	45.5	44.2		
Operatives	303	58.1	56.2			303	35.6	33.8		
Nonfarm laborers	73	56.7	55.4			73	40.1	38.7		
Service workers	107	64.8	60.9			107	36.4	34.7		
Industry ^c				1.20					1.72	
Mining	19	e	e			16	e	e		
Construction	58	61.1	62.1			63	48.8	46.1		
Manufacturing	450	58.5	59.4			443	43.8	43.9		
Transportation and utilities	161	53.5	57.1			159	31.1	31.9		
Trades	136	64.3	62.9			142	45.2	47.5		
Finance, insurance, real estate	41	52.0	52.2			41	34.4	36.2		
Services	108	73.6	65.5			115	46.3	41.8		
Public administration	112	53.9	53.4			107	36.7	35.7		
Unemployment rate in local area ^{c,d}				1.59					0.66	
Low	178	66.9	65.6			261	44.6	44.7		
Medium low	395	56.8	57.8			253	41.9	42.3		
Medium high	199	60.7	59.2			278	40.1	40.2		
High	315	55.9	56.3			292	39.1	38.5		

continued on next page

Table 3.3 continued.

* Significant at $\alpha \leq .05$.

** Significant at $\alpha \leq .01$.

- a Adjusted for the effects of all the variables shown in the stub of the table. For method of adjustment, see text.
- b Analysis confined to respondents employed as nonagricultural wage and salary workers for same employer, in same 3-digit occupational category, and in same local labor market area in both years.
- c The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.
- d The classification of unemployment rates is as follows: For 1966, low is less than 3.0 percent; medium low is 3.0 - 3.9 percent; medium high is 4.0 - 4.9 percent; and high is 5.0 percent or more. For 1971, low is less than 5.0 percent; medium low is 5.0 - 5.9 percent; medium high is 6.0 - 7.4 percent; and high is 7.5 percent or more.
- e Percentages not shown where number of sample cases is fewer than 25.

Table 3.4 Unadjusted and Adjusted^a Proportions of Respondents^b
Making Voluntary Job Change, 1966-1971, by Selected
Characteristics, 1966

Characteristic	1966/1971			
	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
<u>Total sample</u>	1,920	12.9	12.9	3.75**
$\bar{R}^2$	0.032			
<u>Propensity to change jobs</u>				16.36**
Yes	1,230	15.6	15.2	
No	690	8.0	8.8	
<u>Race</u>				0.09
Whites	1,443	13.0	13.0	
Blacks	477	11.0	12.1	
<u>Age (1971)</u>				2.42
50-54	829	14.8	14.6	
55-59	700	12.1	12.3	
60-64	391	10.3	10.3	
<u>Health condition^c</u>				3.30*
Health affects work	338	17.2	16.8	
Health does not affect work	1,576	12.0	12.0	
<u>Relative educational attainment^c</u>				2.09
Mean minus 2+ years	371	9.7	8.0	
Mean minus 1 - 1.9 years	225	12.7	12.4	
Mean + 1.9 years	551	12.6	12.9	
Mean plus 1 - 1.9 years	245	15.0	14.8	
Mean plus 2+ years	521	14.3	15.2	
<u>Relative hourly earnings</u>				7.94**
Mean minus \$1.00+/hour	340	20.2	20.7	
Mean minus \$.50 - \$.99/hour	318	17.6	17.3	
Mean + \$.49/hour	699	9.1	9.1	
Mean plus \$.50 - \$.99/hour	244	10.0	10.2	
Mean plus \$1.00+/hour	244	10.2	9.4	
NA	75	11.3	11.8	

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Table 3.4 continued

Characteristic	1966/1971			
	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
<u>Size of labor force in local area (000's)</u>				1.29
Less than 50	558	16.9	14.9	
50-99	218	10.8	10.2	
100-499	553	12.6	12.8	
500-999	191	9.2	9.8	
1,000 or more	400	10.6	13.0	
<u>Unemployment rate in local area</u>				0.59
Less than 3.0 percent	352	14.3	13.3	
3.0 - 3.9 percent	667	11.6	11.7	
4.0 - 4.9 percent	373	13.2	14.4	
5.0 percent or more	528	13.5	13.2	

* Significant at $\alpha \leq .05$.

** Significant at $\alpha \leq .01$.

a Adjusted for the effects of all the variables shown in the stub of the table. For method of adjustment, see text.

b Analysis confined to respondents employed as nonagricultural wage and salary workers in occupations with at least 10 sample cases in 1966 and employed in 1971.

c The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.

which the propensity measure is used along with those variables that represent opportunities for movement. In Table 3.5, the MCA results for equation (3.5) are presented. Here, rather than using the propensity measure, the components of propensity are used along with the opportunity factors.

It will be noted from Table 3.4 that the propensity measure is a statistically significant predictor of actual movement. Men who had evidenced a propensity to change jobs in 1966 were three-fourths again as likely to have made a voluntary interfirm shift by 1971 as those who had not. In this formulation, however, the only other hypothesis that is supported by the data is that men with below-average hourly earnings are more likely to have made interfirm shifts, other things being equal.¹⁵ Equation (3.5) has greater explanatory power,¹⁶ and it is these results that we now examine (Table 3.5).

Propensity factors Of all of the variables representing the propensity to change jobs, length of service in the 1966 job bears the strongest relationship to the likelihood of an actual voluntary change of employer between 1966 and 1971, which is quite consistent with the findings of other studies.¹⁷ Other things being equal, men with under one year of service at the time of the 1966 survey were more than four times as likely to have changed employers by 1971 as men who had served 15 years or longer. Between these extremes the proportion of job changers decreases monotonically as tenure increases.

Job satisfaction likewise bears a strong independent relationship with the likelihood of a job change. On the basis of the adjusted proportions, men who reported some degree of dislike for their jobs in 1966 were twice as likely as those who liked their jobs very much to have been with a different employer in 1971. This finding is also consistent with those of previous studies, but many of the latter have suffered from the fact that measures of satisfaction were obtained retrospectively after the worker had left the job.¹⁸

Men who in 1966 were not covered by a private pension plan were two-thirds again as likely to have changed employers by the time of the

¹⁵The health variable is significant, but has the opposite relationship to propensity from that which was hypothesized.

¹⁶The adjusted R^2 for equation (3.5) is .12 as contrasted with .03 for equation (3.4).

¹⁷See Parnes (1970), p. 45.

¹⁸Porter and Steers (1973), p. 169; Quinn et al. (1974), p. 24, n. 15.

Table 3.5 Unadjusted and Adjusted^a Proportions of Respondents^b Making Voluntary Job Change, 1966-1971, by Selected Characteristics, 1966

Characteristic	1966/1971			
	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
<u>Total sample</u>	1,920	12.9	12.9	6.38**
$\bar{R}^2$	0.119			
<u>Race</u>				0.90
Whites	1,443	13.0	13.1	
Blacks	477	11.0	10.5	
<u>Age (1971)</u>				2.42
50-54	829	14.8	14.5	
55-59	700	12.1	12.3	
60-64	391	10.3	10.5	
<u>Health condition^c</u>				1.42
Health affects work	338	17.2	15.3	
Health does not affect work	1,576	12.0	12.4	
<u>Tenure in current job^c</u>				27.17**
Less than 1 year	215	31.5	28.6	
1-5 years	343	24.1	21.4	
6-9 years	203	18.0	17.3	
10-14 years	300	6.6	6.9	
15 years or more	846	4.6	6.4	
<u>Pension coverage</u>				11.21**
Covered by employer plan	1,127	8.6	10.2	
Not covered by employer plan	734	19.8	17.3	
NA or "don't know"	59	18.5	13.7	
<u>Job satisfaction^c</u>				5.87**
Likes job very much	1,066	10.8	11.0	
Likes job somewhat	702	14.2	13.8	
Dislikes job	139	22.2	21.7	
<u>Occupation^c</u>				2.33*
Professionals	130	11.5	11.6	
Managers	243	9.4	9.6	
Clerical workers	121	6.8	13.2	
Sales workers	85	27.2	22.5	
Craftsmen	484	13.0	12.4	
Operatives	513	10.7	12.1	
Nonfarm laborers	197	15.3	13.0	
Service workers	143	22.4	18.9	

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Table 3.5 continued

Characteristic	1966/1971			F-ratio
	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	
<u>Industry^c</u>				0.36
Mining	26	9.9	9.6	
Construction	197	18.8	15.1	
Manufacturing	784	10.0	12.4	
Transportation and utilities	241	8.1	11.7	
Trades	264	17.9	14.4	
Finance, insurance, real estate	70	17.7	14.2	
Services	178	18.1	12.6	
Public administration	156	10.4	11.9	
<u>Relative educational attainment^c</u>				3.32**
Mean minus 2+ years	371	9.7	6.9	
Mean minus 1-1.9 years	225	12.7	12.4	
Mean + 1.9 years	551	12.6	13.2	
Mean plus 1-1.9 years	245	15.0	15.8	
Mean plus 2+ years	521	14.3	15.2	
<u>Relative hourly earnings</u>				3.88**
Mean minus \$1.00+/hour	340	20.2	17.9	
Mean minus \$.50 - \$.99/hour	318	17.6	15.0	
Mean + \$.49/hour	699	9.1	9.4	
Mean plus \$.50 - \$.99/hour	244	10.0	12.6	
Mean plus \$1.00+/hour	244	10.2	13.1	
NA	75	11.3	12.2	
<u>Size of labor force in local area ('000's)</u>				0.44
Less than 50	558	16.9	13.8	
50-99	218	10.8	10.8	
100-499	553	12.6	13.1	
500-999	191	9.2	11.6	
1,000 or more	400	10.6	13.0	
<u>Unemployment rate in local area</u>				0.77
Less than 3.0 percent	352	14.3	14.3	
3.0 - 3.9 percent	667	11.6	11.5	
4.0 - 4.9 percent	373	13.2	13.3	
5.0 percent or more	528	13.5	13.6	

* Significant at $\alpha \leq .05$.** Significant at $\alpha \leq .01$.

a Adjusted for the effects of all the variables shown in the stub of the table. For method of adjustment, see text.

b Analysis confined to respondents employed as nonagricultural wage and salary workers in occupations with at least 10 sample cases in 1966 and employed in 1971.

c The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.

1971 interviews as men who had pension coverage. One of the difficulties faced by other studies that have attempted to isolate the effects of pension plans on mobility is the intercorrelation among explanatory variables. That is, firms with pension plans have been shown to have lower turnover rates than those without pension coverage, but it has generally not been clear that the differences can legitimately be attributed to the existence of the pension in view of the pronounced correlation between pension coverage on the one hand and wages and other employment conditions on the other.¹⁹ The fact that the present analysis controls for relative wage level as well as for job satisfaction increases our confidence that pension plans do indeed have an inhibiting effect on interfirm movement, at least among men as close to retirement as those in the present sample. In this connection, it is worth noting that the difference in the adjusted proportions between covered and noncovered workers is smaller than the unadjusted difference, reflecting the kinds of intercorrelations referred to above.

Within the relatively narrow age range of the present sample, age does not bear the strong relationship with voluntary mobility that it does in the labor force at large.²⁰ The mobility rates shown in Table 3.5 are in the hypothesized direction with respect to age, but the variable falls somewhat short of being statistically significant. Nor does health condition appear to have the hypothesized effect on the likelihood of a voluntary job change. Indeed, in terms of the unadjusted percentages, men who reported health problems affecting work in 1966 were over a third again as likely as men without such limitations to have changed jobs by 1971. The difference is somewhat smaller in the adjusted percentages, however, and is not statistically significant. Occupational differences in mobility are significant at the .05 level, with sales workers and service workers having substantially above-average rates.

Opportunity factors Among the variables in our model that are designed to represent exclusively the opportunities for movement, the only ones to achieve statistical significance are relative earnings and relative educational attainment. Although the relationship is not monotonic through all of the categories, men whose 1966 hourly earnings were below the mean for their occupational category by at least \$1.00 were significantly more likely than all other men to have made a voluntary job change by the time of the 1971 survey. The relative educational attainment variable, it will be recalled, was intended to serve as a proxy for the degree of attractiveness of a worker to employers, and thus as a measure of his opportunity for movement. The adjusted mobility rates are in the hypothesized direction; men whose years of schooling are one or more years above average for their occupations were more than twice as likely to have changed employers as those two or more years below average.

¹⁹Parnes (1970), p. 50; Folk (1967).

²⁰Parnes (1970), pp. 44-45.

The hypothesis that black men would be less mobile than white as the result of restricted opportunities is not supported by the evidence. While there is, indeed, a 2.6 percentage point difference in mobility rates between the two color groups in the hypothesized direction, this falls far short of being statistically significant. The two characteristics of the environment that were intended to measure the opportunity for movement also fail to achieve statistical significance. Although there is variation in mobility rates among labor markets with different levels of unemployment, the differences are neither systematic nor statistically significant. As will be argued below, however, there is some reason to believe that this reflects the inadequacy of our unemployment measure rather than constituting good evidence that level of unemployment has no effect on voluntary movement.

Comparison of 1967-1969 and 1969-1971 Periods

In Table 3.6 we present the MCA results for the two two-year time periods 1967-1969 and 1969-1971. The data relate to men employed as nonagricultural wage and salary workers at both the 1967 and 1969 survey dates who were also employed at the time of the 1971 survey. It is important to note that the identical men are covered in both time periods. The model is somewhat abbreviated, since some of the explanatory variables used in the analysis of the 1966-1971 time period are not available for 1967 and 1969.

Perhaps the most important finding that emerges from the data is the lower mobility rate between 1969 and 1971 than during the earlier two-year time period, a difference that was expected because of the higher unemployment rate and more limited job opportunities in the later period. Whereas 6.8 percent of the men voluntarily changed employers between the 1967 and 1969 survey dates, the corresponding proportion over the 1969-1971 period was only 4.8 percent. It is to be noted that a differential of at least 1 percentage point between the two periods exists in virtually every category of each variable.

On the other hand, within each time period there is no evidence of a cross-sectional relationship between the unemployment rate in the local labor market area and the mobility rate. Nevertheless, the well-documented inverse relationship between level of unemployment and voluntary turnover in the labor force as a whole²¹ makes us reluctant to reject the hypothesis for this age group of men. The difference in mobility rates between the two time periods leads us to the belief that the likelihood of a voluntary interfirm shift by a middle-aged job holder is somewhat greater in a buoyant than in a depressed labor market. The failure of the cross-sectional analysis to reveal the same tendency may reflect the

²¹Parnes (1970), pp. 52-53.

Table 3.6 Unadjusted and Adjusted^a Proportions of Respondents^b Making Voluntary Job Change, 1967-1969 and 1969-1971, by Selected Characteristics

Characteristic	1967-1969				1969-1971			
	Number of respondents	Unadjusted percent	Adjusted percent ^a	F-ratio	Number of respondents	Unadjusted percent	Adjusted percent ^a	F-ratio
Total sample	2,364	6.8	6.8	6.15**	2,364	4.8	4.8	5.33**
$\bar{R}^2$	0.077				0.065			0.04
Race								
Whites	1,718	6.9	6.8	0.002	1,718	4.8	4.8	
Blacks	646	6.4	6.8		646	4.5	4.5	1.98
Age (1971)								
50-54	1,018	7.6	7.4	1.44	1,018	5.2	5.2	
55-59	854	6.9	7.1		854	5.2	5.2	
60-64	492	5.1	5.2		492	3.2	3.2	
Tenure ^c								
Less than 1 year	233	19.3	17.5	23.38**	180	19.3	18.2	25.68**
1-5 years	436	12.6	11.8		431	8.5	8.4	
6-9 years	239	8.5	7.8		241	5.8	5.6	
10-14 years	328	3.5	3.6		282	2.8	2.5	
15 years or more	1,079	1.7	2.6		1,170	1.1	1.4	
NA	49	21.6	19.9		60	10.7	10.2	
Job satisfaction								
Likes job very much	1,343	5.1	5.2	8.37**	1,243	4.2	4.1	3.31*
Likes job somewhat	835	7.7	8.0		966	4.8	5.0	
Dislikes job	151	15.4	14.6		133	10.6	9.8	
NA	35	12.1	6.6		22	e	e	
Occupation ^c								
Professionals	229	7.1	7.6	1.86	235	2.7	2.7	2.06*
Managers	266	4.1	5.1		276	5.0	6.2	
Clerical workers	164	3.7	5.8		168	3.0	4.7	
Sales workers	92	14.3	12.6		97	12.4	10.7	
Craftsmen	586	6.9	7.0		603	4.6	4.4	
Operatives	580	4.8	5.3		551	3.1	3.8	
Nonfarm laborers	227	9.1	6.9		205	6.4	5.5	
Service workers	214	13.0	9.3		212	8.5	5.2	

continued on next page.

Table 3.6 continued

Characteristic	1967-1969				1969-1971			
	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
Industry								
Mining	39	10.6	9.4	1.87	31	0.8	0.6	1.60
Construction	215	10.0	6.2		213	8.6	5.1	
Manufacturing	915	4.2	5.3		908	2.8	3.8	
Transportation and utilities	294	3.2	6.0		294	3.3	5.6	
Trades	295	11.0	10.4		282	7.1	5.1	
Finance, insurance	84	7.3	7.2		87	6.0	3.8	
Services	293	12.1	8.9		320	8.6	8.0	
Public administration	224	5.9	6.6		225	2.7	3.5	
Health condition	420	8.4	7.5	0.23	430	7.7	6.8	2.79
Health affects work								
Health does not affect work	1,903	6.4	6.7		1,931	4.1	4.3	
NA	41	9.7	5.8		3	e	e	
Size of labor force								
(000's)								
Less than 50	637	7.8	7.2	2.59*	628	5.1	4.6	1.75
50-99	267	4.9	5.2		265	2.6	2.6	
100-499	714	7.7	7.6		714	6.0	6.1	
500-999	247	5.5	5.4		245	3.5	4.4	
1,000 or more	488	5.2	6.2		487	4.3	4.7	
NA	11	e	e		25	4.1	1.0	
Local area unemployment rated								
Low				1.48				0.07
Medium low	436	8.5	8.3		567	5.3	5.1	
Medium high	799	5.6	6.2		796	4.5	4.6	
High	468	8.5	8.3		285	5.1	4.9	
NA	649	5.4	5.5		691	4.5	4.7	
	12	e	e		25	4.1	4.1	

continued on next page.

- * Significant at $\alpha \leq .05$.
- ** Significant at $\alpha \leq .01$.
- a Adjusted for the effects of all the variables shown in the stub of the table. For method of adjustment, see text.
- b Analysis confined to respondents employed as nonagricultural wage and salary workers in 1967 and 1969 who were employed in 1971.
- c The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.
- d The classification of unemployment rates is as follows: For 1967, low is less than 3.0 percent; medium low is 3.0 - 3.9 percent; medium high is 4.0 - 4.9 percent; and high is 5.0 percent or more. For 1969, the first two categories are the same; medium high is 4.0 - 4.4 percent; and high is 4.5 percent or more.
- e Percentages not shown where base is fewer than 25 sample cases.

inadequacy of the local labor market unemployment measure²² or may result from the fact that the time periods are too long for the relationship to be adequately measured, given that the unemployment rate relates to the beginning of the period while the job change may occur at any time during the period.

It will be noted that tenure is very strongly associated with mobility in each of the two-year periods, as it was found to be over the five-year period. Job satisfaction is also consistently related to the likelihood of a job change, although less strongly for the 1969-1971 period than for either the five-year period or for 1967-1969. This suggests that job dissatisfaction is less likely to produce turnover in a loose than in a tight labor market.²³ Finally, a word is in order relative to the health variable. Even though the differences are not large enough to be statistically significant, the fact that in both periods men with health problems affecting work are more likely to make a job change than those without health limitations--the same result we observed in the five-year period--makes us wish to re-examine the rationale underlying our original hypothesis. We expected men in poor health to be less mobile both because of a lower propensity to change jobs stemming from a "fear of the unknown" and because of their lesser attractiveness to potential employers. While this line of reasoning still seems persuasive for changes of employer that are not accompanied by an occupation change, it may well also be that certain health problems compel workers to make "voluntary" changes into different types of work, and that such changes can be effected only through a change of employer.

V THE CONSEQUENCES OF JOB CHANGING

We shift our attention in this section to the effects of voluntary and involuntary changes of employer on earnings, unemployment experience, and job satisfaction. To the extent that workers do indeed move among jobs to improve "net economic advantage," one would expect voluntary changes to be reflected in gains in one or more of these aspects of work. It is not immediately clear how one should explore these questions. For example, during a period in which average money wages are rising

²² The measure of unemployment in a county or SMSA for a particular year is derived from the 12-month average of data from the CPS. For all but the largest areas, the sampling error of these estimates is quite high.

²³ Lawler (1973), p. 338 has suggested this hypothesis, but indicates that no study has hitherto "compared the relationship between satisfaction and turnover under different economic conditions to see if it is stronger under full employment."

continuously, it is obviously not sufficient merely to ascertain whether job changers have experienced wage gains, for this would impose too "easy" a test. On the other hand, to compare the current earnings of men who have changed employers with those of men who have not would lead to the opposite bias, since we have seen that men with below-average earnings within an occupation category are more likely than others to change jobs.

Conceptually, the relevant question is whether the job changers are better off than they would have been had they not changed, and this is a very difficult question to answer with the data that are available. With respect to earnings, we have chosen to address the question by comparing the percentage increase in hourly earnings of job changers and nonchangers over the period in question. This is tantamount to assuming that the changers, on average, would have done relatively as well as the nonchangers had they remained where they were. For those who quit because of dissatisfaction with the rate at which their earnings were rising, or because they foresaw a layoff, this is clearly an unwarranted assumption.

Hourly Earnings

Table 3.7 presents mean hourly earnings as of the survey weeks of 1966 and 1971 for three categories of men employed as nonagricultural wage and salary workers: those who were employed with the same employer at the two dates ("nonchangers"), those who had made a voluntary change, and those who had changed as the result of layoff or discharge (involuntary changers).²⁴ In addition, a measure of the average change in earnings between 1966 and 1971 is also presented. Appendix Table 3A-1 presents the same data for white craftsmen and operatives, the only two occupational groups having sufficient sample cases for separate treatment.

The 1966 earnings of voluntary job changers were lower than those of men who remained with the same employer, which is of course consistent with our findings in the previous section. Overall, the 1966 mean hourly earnings of white voluntary changers was 14 percent below the average for nonchangers; among blacks the differential was 23 percent. It is somewhat surprising to note that the same is not true of the men who moved involuntarily--at least so far as the white men are concerned. There was virtually no difference in 1966 earnings between white men who subsequently suffered an involuntary separation and found another job and those who remained with their employer. Among blacks, the involuntary changers had 1966 earnings 20 percent below the nonchangers.

How did the gains in hourly earnings of the job changers compare with those of the nonchangers? On the basis of the average relative change over

²⁴Where individuals made more than one job change during the period, the reason for separating from the earliest job--i.e., the one held in 1966--was used as the basis for classification.

Table 3.7 Mean Hourly Earnings in 1966 and 1971 and Mean Ratio of 1971/1966 Earnings, by Comparative Job Status 1966-1971, and Race^a

Measure	Nonchangers	Voluntary changers	Involuntary changers
WHITES			
Number of respondents	1,230	195	139
Mean hourly earnings, 1966	\$3.57	\$3.07	\$3.60
Mean hourly earnings, 1971	\$5.01	\$4.15	\$4.88
Mean ratio, 1971/1966 ^b	1.44	1.45	1.41
BLACKS			
Number of respondents	494	64	46
Mean hourly earnings, 1966	\$2.42	\$1.86	\$1.94
Mean hourly earnings, 1971	\$3.52	\$2.39	\$2.54
Mean ratio, 1971/1966 ^b	1.49	1.50	1.43

a Respondents employed as nonagricultural wage and salary workers in 1966 and employed as wage and salary workers in 1971. To minimize the effects of reporting and coding errors, the universe has been further restricted to respondents with hourly earnings in the two reference periods between 75 cents and 25 dollars and for whom the ratio of earnings in one period to the other did not exceed 3.

b Arithmetic mean of the relative earnings (1971 ÷ 1966) computed for each respondent.

the five-year period there was virtually no difference, overall, in the case of either white or black men between the voluntary movers and the nonchangers; the involuntary movers fared slightly worse. In each of the two major occupation groups of whites for whom there are sufficient sample cases, the voluntary movers fared better than the nonchangers, but so did the involuntary changers. In the case of the craftsmen, the involuntary changers did at least as well as the voluntary changers (Table 3A-1).²⁵

²⁵ Because it was thought that these patterns might reflect the peculiar characteristics of the construction industry, Tables 3.7 and 3A-1 were re-run excluding construction workers. The results, however, were virtually identical to those shown.

The data for the two-year periods 1967-1969 (Table 3.8) and 1969-1971 (Table 3.9) are reasonably consistent with the pattern that has been described for the five-year period, although there are a few significant differences between the earlier and later periods. The base year earnings of voluntary job changers are in all cases lower than those of nonchangers and, except for blacks in 1967, are lower than for the involuntary changers as well. Over the 1967-1969 period, voluntary job changers among the whites enjoyed substantially greater increases in earnings than did the nonchangers, while those who were involuntarily separated experienced increases rather similar to those of the nonchangers. Among blacks, however, the involuntary changers had the highest rate of wage improvement, while there was very little difference between the voluntary changers and the nonchangers. In the 1969-1971 period nonchangers fared best in the case of both blacks and whites, while the involuntary changers experienced somewhat larger earnings gains than the voluntary changers.

Table 3.8 Mean Hourly Earnings in 1967 and 1969 and Mean Ratio of 1969/1967 Earnings, by Comparative Job Status, 1967-1969, and Race^a

Measure	Nonchangers	Voluntary changers	Involuntary changers
WHITES			
Number of respondents	1,543	122	85
Mean hourly earnings, 1967	\$3.74	\$3.01	\$3.72
Mean hourly earnings, 1969	\$4.30	\$3.62	\$4.29
Mean ratio, 1969/1967 ^b	1.17	1.24	1.18
BLACKS			
Number of respondents	634	45	34
Mean hourly earnings, 1967	\$2.50	\$2.13	\$1.82
Mean hourly earnings, 1969	\$2.88	\$2.32	\$2.24
Mean ratio, 1969/1967 ^b	1.19	1.15	1.32

a Respondents employed as nonagricultural wage and salary workers in 1967 and employed as wage and salary workers in 1969. To minimize the effects of reporting and coding errors, the universe has been further restricted to respondents with hourly earnings in the two reference periods between 75 cents and 25 dollars and for whom the ratio of earnings in one period to the other did not exceed 2.

b Arithmetic mean of the relative earnings (1969 ÷ 1967) computed for each respondent.

Table 3.9 Mean Hourly Earnings in 1969 and 1971 and Mean Ratio of 1971/1969 Earnings, by Comparative Job Status, 1969-1971, and Race^a

Measure	Nonchangers	Voluntary changers	Involuntary changers
WHITES			
Number of respondents	1,470	73	92
Mean hourly earnings, 1969	\$4.26	\$3.73	\$4.40
Mean hourly earnings, 1971	\$4.86	\$4.05	\$4.87
Mean ratio, 1971/1969 ^b	1.16	1.10	1.13
BLACKS			
Number of respondents	584	28	39
Mean hourly earnings, 1969	\$2.87	\$2.26	\$2.69
Mean hourly earnings, 1971	\$3.36	\$2.20	\$3.08
Mean ratio, 1971/1969 ^b	1.19	1.07	1.16

- a Respondents employed as nonagricultural wage and salary workers in 1969 and employed as wage and salary workers in 1971. To minimize the effects of reporting and coding errors, the universe has been further restricted to respondents with hourly earnings in the two reference periods between 75 cents and 25 dollars and for whom the ratio of earnings in one period to the other did not exceed 2.
- b Arithmetic mean of the relative earnings (1971 ÷ 1969) computed for each respondent.

In view of the small sample sizes on which some of the cells in Tables 3.7, 3.8, and 3.9 are based, it is difficult to draw confident conclusions. Nevertheless, we believe that the following generalizations are warranted: (1) middle-aged men who make voluntary job changes are generally likely to enjoy relative wage increases over the ensuing several years at least as large as those enjoyed by men who do not change jobs; (2) the likelihood of enjoying an advantage over nonchangers as the result of a voluntary move is greater during a relatively buoyant labor market (1967-1969) than during a relatively depressed one (1969-1971); (3) while involuntary job changers, generally speaking, do not do as well as voluntary movers, the differences are often not very great. It appears that when men lose their jobs and are able to find other ones, the changes sometimes turn out to be favorable, at least from the standpoint of earnings.

Unemployment Experience

To shed light on the effects of job changing upon unemployment experience, Table 3.10 relates unemployment experience in the two-year period 1969-1971 to unemployment experience in 1965-1967 for men who changed employers between 1967 and 1969 and for those who did not. To begin with, it is evident that men with unemployment experience in the earlier period were more likely than men whose work was steady to make job changes.²⁶ For example, among whites, only 6 percent of those with no unemployment in the 1965-1967 period had made a voluntary job change between 1967 and 1969, in contrast with 16 percent of those who had suffered some unemployment. A comparable pattern prevailed for the blacks.

Unemployment became more extensive in 1969-1971 than it had been in the earlier period for changers and nonchangers alike, but the position of voluntary changers deteriorated somewhat more than that of nonchangers and the involuntary changers suffered by far the most serious reversals. For white men with no unemployment at all in the 1965-1967 period, the average number of weeks of unemployment in 1969-1971 was only seven-tenths for nonchangers, as compared with 1.9 weeks for voluntary changers and 4.6 weeks for involuntary changers. It would appear, then, that the sacrifice of seniority that is entailed in a job change is reflected in the subsequent experience even of those who presumably weigh this factor in deciding to change, and all the more strongly among those for whom the change is not a matter of choice.

Job Satisfaction

Table 3.11 examines differences in job satisfaction among job changers and nonchangers over the five-year period in terms of the proportions in each category reporting the highest degree of satisfaction,--i.e., that they liked their 1971 jobs very much--controlling for the level of job satisfaction they professed in 1966. In interpreting the data in this table, it is important to note that, overall, there was a decline in the degree of satisfaction over the five-year period. Among whites, 58 percent reported liking their 1966 jobs very much, in contrast to only 46 percent who registered the same degree of satisfaction in 1971. Among blacks, the decline was smaller--from 54 to 51 percent.

This deterioration in job satisfaction, however, was attributable solely to those who remained with the same employer during the period and, for the whites, to the involuntary job changers. The proportion of very satisfied workers among white voluntary job changers remained virtually stable; among corresponding blacks, it actually increased from 31 to 50 percent. Of white men who liked their jobs only moderately in 1966, a fourth of the nonchangers, but over two-fifths of the voluntary changers had become highly enthusiastic by 1971. Among the same group of blacks, the corresponding proportions for nonchangers and voluntary changers were 39 and 51 percent.

²⁶ There is no assurance that the unemployment in the period 1965-1967 represented layoffs from the employer with whom the individual was employed in 1967; it might have antedated employment with that employer.

Table 3.10 Mean Number of Weeks of Unemployment, 1969-1971, by Number of Weeks of Unemployment 1965-1967, Comparative Job Status 1967-1969, and Race^a

Number of weeks of unemployment, 1965-1967	Nonchangers		Voluntary changers		Involuntary changers	
	Number of respondents	Mean weeks of unemployment	Number of respondents	Mean weeks of unemployment	Number of respondents	Mean weeks of unemployment
WHITES						
Total or average	1,753	1.0	145	4.1	98	8.5
0 weeks	1,568	0.7	101	1.9	50	4.6
1-13 weeks	126	2.1	30	7.4	26	9.7
14 weeks or more	52	6.3	13	b	21	b
BLACKS						
Total or average	690	1.5	56	1.5	38	11.0
0 weeks	563	1.0	37	1.5	14	b
1-13 weeks	82	2.4	12	b	8	b
14 weeks or more	39	5.9	6	b	15	b

^a Respondents employed as nonagricultural wage and salary workers in 1967 and employed as wage and salary workers in 1969.

^b Percentages not shown where base is fewer than 25 sample cases.

Table 3.11 Proportion of Respondents Highly Satisfied with 1971 Job,
by Degree of Satisfaction with 1966 Job, Comparative Job
Status, 1966-1971, and Race^a

Comparative job status, 1966-1971	Total or average	Liked job very much	Liked job somewhat	Disliked job
WHITES				
Total or average				
Number of respondents	1,801	1,035	629	125
Horizontal percent distribution	100	58	35	7
Percent highly satisfied, 1971	46	59	29	20
Nonchangers				
Number of respondents	1,363	804	465	87
Horizontal percent distribution	100	60	34	6
Percent highly satisfied, 1971	46	60	25	15
Voluntary changers				
Number of respondents	212	102	84	23
Horizontal percent distribution	100	50	39	11
Percent highly satisfied, 1971	49	55	43	b
Involuntary changers				
Number of respondents	155	89	57	9
Horizontal percent distribution	100	57	37	6
Percent highly satisfied, 1971	46	54	36	b
BLACKS				
Total or average				
Number of respondents	704	382	265	46
Horizontal percent distribution	100	54	39	7
Percent highly satisfied, 1971	51	59	42	40
Nonchangers				
Number of respondents	531	318	185	22
Horizontal percent distribution	100	59	36	5
Percent highly satisfied, 1971	52	60	39	b
Voluntary changers				
Number of respondents	76	23	36	14
Horizontal percent distribution	100	31	53	16
Percent highly satisfied, 1971	50	b	51	b
Involuntary changers				
Number of respondents	49	19	22	7
Horizontal percent distribution	100	43	45	12
Percent highly satisfied, 1971	48	b	b	b

a Respondents employed as nonagricultural wage and salary workers in 1966 and employed as wage and salary workers in 1971.

b Percentages not shown where base is fewer than 25 sample cases.

It is interesting that the involuntary job changers fared slightly better than the nonchangers in terms of job satisfaction. Among whites, the decline in the proportion of highly satisfied workers between 1966 and 1971 was somewhat smaller among the involuntary changers (from 57 to 46 percent) than among the nonchangers (from 60 to 46 percent). Among blacks, the proportion of highly satisfied workers among the involuntary changers actually increased. As another piece of evidence, whereas only a fourth of the white nonchangers who had been only moderately satisfied in 1966 became highly satisfied in 1971, this was true of over a third of the involuntary changers in that category. Thus, the evidence relating to job satisfaction is consistent with that relating to earnings; involuntary separations--when followed by the acquisition of another job--not infrequently turn out to be advantageous.

When analogous data are examined for the two subperiods, 1967-1969 and 1969-1971 (Appendix Tables 3A-2 and 3A-3), virtually the same patterns are evident as have been described for the five-year period. Within each period the overall proportion of highly satisfied workers declined, but among voluntary job changers it increased. In both periods, also, involuntary job changers generally fared at least as well as nonchangers so far as change in satisfaction is concerned.

VI SUMMARY AND CONCLUSIONS

Both the propensity to change jobs and the opportunities for doing so are considerably more limited for middle-aged than for younger men. As a consequence, their actual mobility rates are substantially below those for men in their twenties and thirties. Nonetheless, more than one in every eight men in our sample employed as wage and salary earners in 1966 had voluntarily moved to a different employer by 1971. An additional one-twelfth had shifted not by choice, but as the result of a layoff or discharge. Our purpose in this chapter has been to identify the factors associated with variations among this age group of men in the propensity to change jobs and in the actual rate of voluntary movement. We have also examined several dimensions of the consequences of voluntary and involuntary movement.

Propensity to Change Jobs

The degree to which middle-aged men are inclined to respond to an alternative job opportunity varies substantially. There are those so disenchanted with their present circumstances that they would apparently accept a job doing the same kind of work elsewhere in the same local labor market area even at a lower wage rate. At the other extreme, there are those--a substantial plurality--who assert that they would not consider the alternative at any conceivable wage rate.

Among the most important factors differentiating the latter group of men from those who profess a willingness to change jobs are length of service and degree of satisfaction in their current jobs, age, and

coverage by a private pension plan. The longer the tenure in current job, the less likely is a man to register a willingness to change. The reasons doubtless lie both in economic and in social psychological factors. Job security is generally substantially enhanced by long service, especially in employment covered by collective bargaining agreements, and there are additional perquisites related to long tenure, such as vacation rights and pension benefits. Moreover, the longer an individual has served in a given situation, the stronger are the social and psychological bonds that tie him to the work place. Even within the relatively narrow age range of the present sample, propensity to change jobs declines with advancing age, presumably because of the greater risks involved for older men. Contrary to our expectations, our measure of health condition shows no relationship to the disposition to change jobs. Similarly, being black does not have an inhibiting effect on the propensity to move.

Propensity to change jobs, as we have measured it, is not stable over time. There are differences in response between 1966 and 1971 even for men employed in the same firm and the same occupation throughout the period. On average, the change was toward lower propensities, as one would expect because of the increase in age and tenure over the period. Yet, there is evidence that the decline in propensity was greater than what can be accounted for by these factors; the looser labor market in 1971 had also apparently dampened the willingness of the men to contemplate a job change.

Actual Voluntary Job Changing

Changing jobs is a function of opportunities as well as of propensities. We have thus examined the relationship between the actual voluntary mobility rate and a number of variables designed to reflect both propensities and opportunities for movement. The probability of a voluntary job change between 1966 and 1971 is inversely related to length of service, degree of job satisfaction, and relative hourly earnings of the men in their 1966 jobs. It is positively related to the individual's educational attainment relative to that of others in his occupation. It is lower for men covered by pensions than for those who are not. There are also differences in mobility among the major occupation groups. Moreover, although the variables do not achieve statistical significance, we believe that the evidence is consistent with the hypothesis that the likelihood of a voluntary job change is inversely related to the age of a middle-aged worker and to the level of unemployment he confronts. In the latter instance, the lower mobility rates in the 1969-1971 period than in the 1967-1969 period are evidence of the relationship between level of economic activity and voluntary mobility.

On the other hand, there is no evidence in our data that an individual's color or the size of the community in which he resides is related to the probability of a voluntary job shift. Finally, although our health variable shows no statistically significant relationship with mobility, the regularity of the data leads us to believe that--contrary

to our original hypothesis--men with health limitations are more likely than others to make voluntary job changes.

The Consequences of Job Changing

The voluntary job changes made by the men in our sample over the five-year period of the study appear on average to have improved the conditions of those who made them. Certainly this is true if the criterion is job satisfaction, for the voluntary changers were the only group whose average degree of satisfaction increased over the period. In terms of gains in hourly earnings, one can say that the changers did at least as well as the nonchangers, and generally speaking, somewhat better. Only in terms of unemployment did the voluntary job changers appear to pay a penalty relative to the nonchangers. An unexpected finding is that men who are forced to change jobs often profit from the change.

Conclusion

Some of the findings that have been summarized in the preceding paragraphs have policy implications. To begin with, it is clear that although middle-aged men are not so mobile as other segments of the labor force, there is sufficient propensity to move among them to warrant a concern for the amount of labor market information they have and for the opportunities they have for movement. Second, this study has added to an already impressive accumulation of evidence that the objective of creating an efficient labor market cannot be unmindful of the aggregate level of job opportunities. The propensity to move as well as actual movement are positively related to the level of economic activity. Finally, the evidence has strengthened the suspicion that private pension plans--given their current characteristics--tend to inhibit both the propensity of middle-aged men to make voluntary job changes and the probability of their actually making a change. This suggests that the approach to full vesting of pension rights represented by the Pension Reform Act of 1974 can be supported not only in terms of equity considerations, but as a means of making the labor market more nearly resemble the competitive ideal.

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CHAPTER IV

OCCUPATIONAL MOBILITY AMONG MIDDLE-AGED MEN

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I INTRODUCTION

Occupational mobility serves a variety of functions for individuals and societies. First, in the context of economic theory, it is one of the equilibrating mechanisms which restores "appropriate" differentials in rewards between occupations. That is, occupational mobility is one of the processes of reallocation of labor services. Second, it is a principal mechanism in Western societies by which an individual's status in the social hierarchy is altered. Finally, it is a process which facilitates returns to investments in human capital (resources). This study incorporates elements from each of these perspectives on occupational mobility and, therefore, is built on a rather eclectic set of theories.

Most of the existing empirical studies of occupational change have focused on intergenerational mobility, in order to assess the nature of social stratification systems.¹ For example, even the prodigious work of Blau and Duncan has father-son mobility as a principal point of departure.² In addition, much of the research in this area has utilized cohort data to represent change, rather than longitudinal panel data.³ Finally, even those few studies which have employed longitudinal data have been forced to rely upon retrospective information concerning changes in occupations, with all of the attendant problems of faulty recall and reporting error.⁴ Despite these limitations, research has

^{*} I wish to acknowledge the conscientious research assistance of Patricia Shields in the preparation of this study.

¹ See, for example, Jackson and Crockett (1964) and Jaffe and Carleton (1954). All footnote citations refer to the bibliography which follows this chapter.

² Blau and Duncan (1967).

³ See, for example, Aronson (1969) and Jaffe (1971).

⁴ See Blau and Duncan (1967); Gitelman (1966); Saben (1967); and Sorenson (1972).

produced a rather lengthy list of generalizations about the correlates of intragenerational occupational mobility which warrant further examination with better data.

This study focuses on the changes of occupation that occurred among our middle-aged men over the five-year survey period. As a point of departure, we are interested in whether the net upward occupational mobility which had characterized the work careers of these men up to 1966⁵ continued to 1971. Another point of interest is that, without exception, previous researchers have concluded that there is an inverse relationship between age and the likelihood of an occupational shift. Indeed, Jaffe asserts "If a man has not 'made it' by age 40 or thereabouts, he is likely never to make it."⁶ While our empirical work cannot distinguish among the several causes, it is well to bear in mind that this relationship may derive from a declining propensity to move or from declining opportunities, as relative skill depreciation occurs or as employers actively discriminate against older workers. Furthermore, even if there is little net upward mobility among middle-aged men, it is of interest to know whether downward occupational change is legitimately cast as one of the labor market problems of middle age. Finally, mobility is presumed to generate and facilitate returns to investment in human capital; hence, we are interested in examining whether several forms of human capital actually are determinants of occupational change and whether mobility "pays off."

The next section of the chapter contains a comparison of occupational change during two phases of the work lives of men who were 50 to 64 years of age in 1971: the period between their first job and 1966 job and the five-year span between their 1966 and 1971 jobs. The third section of the chapter presents the conceptual framework for the study of four dimensions of occupational mobility: (1) the likelihood of an upward occupational move, (2) the likelihood of a downward occupational move, (3) the distance of occupational mobility in terms of status, and (4) the returns of occupational mobility in terms of earnings and job satisfaction. In the fourth section we present the results of multivariate statistical analysis of these four aspects of occupational change. The final section of the chapter summarizes the study and sets the conclusions in the context of existing knowledge about occupational mobility.

⁵See Parnes et al. (1968).

⁶Jaffe (1971), p. 42. On this point also Adams and Aronson (1957), p. 143.

II OCCUPATIONAL MOBILITY: AN EMPIRICAL OVERVIEW

The purpose of this section is to describe the occupational changes that occurred between 1966 and 1971 in the context of the lifetime mobility of our sample of middle-aged men. In doing this we rely on movement between major occupation groups--i.e., the one-digit categories in the Census occupational classification scheme.⁷ We begin with a discussion of net mobility, move on to consider gross occupational flows, and conclude with a comparison between these results and other data which use a similar definition of occupational mobility.

Net Mobility

It is clear that men who were in their fifties and early sixties in 1971 had, by the time they were first interviewed in 1966, experienced substantial occupational mobility during their work careers (Table 4.1). In fact, among the subset of men being studied here⁸ only one-fourth were in the same major occupation group⁹ in 1966 as the one in which they held

⁷Although this definition of occupational change does conceal some mobility, it facilitates visual display of the broad patterns and provides some comparability with published research on intra-generational mobility. For the purpose of multivariate analysis of 1966-to-1971 mobility we rely upon movement between three-digit occupation groups. Measurement error resulting from the latter definition led us to consider some types of shifts across major occupation group lines to be "illegitimate,"--i.e., spurious. In order to maintain a consistent universe for the study, respondents displaying illegitimate occupation changes have been eliminated from the sample under analysis. Further discussion of the methodology of measuring occupational change appears below in the preface to the multivariate results.

⁸The precise definition of the universe under study is males 50 to 64 years of age in 1971 who were (1) not retired from their "regular" jobs in 1966 or 1971, (2) employed as wage and salary workers in both the 1966 and 1971 survey weeks and (3) living in the same county (SMSA) in 1966 and 1971. For an explanation of the last restriction, see footnote 21. The status of being "nonretired" is defined by the response to a survey question and by the facts of having worked at least 1,500 hours in 1965 and at least 1,000 hours between the 1969 and 1971 surveys. This universe represents about six million American workers.

⁹There are ten major occupation groups in the 1960 classification scheme of the Bureau of the Census. Because our focus is restricted to wage and salary workers, the ninth (farmers and farm managers) and tenth (farm laborers) groups have been aggregated into a single category of farm workers.

Table 4.1 Major Occupation Group of First Job after Leaving School,
Job in 1966 Survey Week and Job in 1971 Survey Week, by
Race: Nonretired Middle-Aged Males Employed as Wage and
Salary Workers^a

Major occupation group	WHITES			BLACKS		
	First job ^b	1966 job	1971 job	First job ^b	1966 job	1971 job
Total number of respondents	1,543	1,543	1,543	601	601	601
Total percent	100	100	100	100	100	100
Professionals, technicians	9	12	12	3	3	4
Managers	2	14	16	c	2	2
Clerical workers	11	7	6	2	6	7
Sales workers	7	5	5	2	c	c
Craftsmen	8	29	29	2	15	15
Operatives	27	21	20	22	32	31
Nonfarm laborers	14	4	4	22	18	18
Service workers	4	6	6	13	17	19
Farm workers	18	2	2	33	6	5

- a A more precise definition of the universe is males 50 to 64 years of age in 1971 who were not retired from their "regular" job as of 1966 or 1971, who were employed as wage and salary workers in both the 1966 and 1971 survey weeks, and who were living in the same county in 1966 and 1971. The status of being "nonretired" is defined by the response to a survey question and by the facts of having worked at least 1,500 hours in 1965 and at least 1,000 hours between the 1969 and 1971 surveys.
- b Percentage distribution calculated excluding 17 white and 2 black respondents whose first jobs were in the military service.
- c Percent is between 0.1 and 0.5.

their first job after leaving school. As can be seen from Table 4.1, there was a considerable net increase in high-level white collar employment and a substantial decline in farm work over this span of years. Contrary to trends in the occupational composition of the total labor force over the period, the numbers of white men serving as clerical workers and operatives were actually smaller in 1966 than in the first jobs the men had held. For whites and blacks alike, there is no clearer evidence of lifetime career progression than the several-fold net increase in the proportion working as craftsmen.

The net mobility from 1966 to 1971 suggests a continuation of the forces that produced the lifetime occupational change to 1966, even though the 1966 to 1971 changes are barely perceptible at this level of aggregation. That is, there was continued growth in the proportion occupying professional, managerial, and service jobs along with a continued decline in the proportions employed as operatives and farm workers. On the other hand, there is little evidence of another trend noted in the initial report on this study "... that the disadvantage in occupational status that black men experience relative to whites at the beginning of their careers becomes even more pronounced as the careers of the two groups unfold."¹⁰ For example, only in the occupancy of managerial positions did the white-black difference widen between 1966 and 1971,¹¹ and the intercolor gap in the proportion in professional-technical jobs even narrowed slightly. Another way of putting this is that although the occupational difference between whites and blacks was greater in 1966 than at the outset of their careers, it was no greater in 1971 than in 1966. An index of interoccupational segregation of the racial groups has the value of 32 in the case of the first job, 40 in 1966 and 40 in 1971.¹²

¹⁰See Parnes et al. (1970), pp. 118-19.

¹¹To the extent that racial differences in the access to financial capital for becoming self-employed persisted over the five-year period, our data on wage and salary workers understate the intercolor difference in the occupancy of managerial positions.

¹²This index has a range of values from 0 to 100, with the amount of segregation increasing as the index increases. The index is computed as one half of the sum of the absolute deviations between the occupational percentage distributions of whites and blacks. Symbolically, the index is

$$\frac{N}{2} \sum_i |W_i - B_i|$$

where W_i (B_i) is the percent of whites (blacks) employed in the i th occupation.

Gross Mobility

It is well known that net changes in labor market status over period of time often conceal as much as they reveal about mobility patterns. Despite the barely noticeable change in the occupational distribution between 1966 and 1971, the transition matrices in Table 4.2 indicate that only three-fourths of these men were in the same major occupation group in 1971 as in 1966. Of course, this proportion varies considerably according to the occupation of the 1966 job. Men in clerical/sales and nonfarm laborer jobs exhibit the highest rates of mobility across occupational lines, while the greatest immobility is found among those in professional-technical and service positions. All in all, the patterns of change are similar to those exhibited by the transition matrix comparing occupation of first job to occupation in 1966 (Table 4A-1). The principal difference between the first-to-1966 and 1966-to-1971 matrices is that the latter displays far greater stability (absolute and relative) among farm workers. This is not unexpected in view of the stage of the life cycle represented by the 1966-to-1971 data and in view of the more dramatic shift of the American economy away from agriculture during the three decades between the 1930's and the 1960's.

As is true of the occupational change between the first and 1966 jobs, the matrix of occupational transitions between 1966 and 1971 contains examples of nearly every possible interoccupation group change,¹³ but some changes are more likely than others. For both racial groups, the vast majority of departures from a blue collar category culminate in entrance to another blue collar category. For example, more than three-fifths of the white men and four-fifths of the black men who left jobs as operatives between 1966 and 1971 wound up in jobs as craftsmen or nonfarm laborers. Similarly, more than two-thirds of the white men who departed from a white collar category were still in white collar positions in 1971.

Gross Mobility: A Comparison of NLS and Census Data

The foregoing results may be compared with retrospective longitudinal data generated by questions contained in the 1970 decennial Census. Using the published data from the Census five-percent sample, it is possible to construct a transition matrix very closely approximating the one shown in Table 4.2 (Table 4A-2).¹⁴ These data indicate an overall

¹³See footnote 7 for an explanation of some of the empty cells.

¹⁴The principal differences between the matrices are as follows: Census data are based on a retrospective question answered by whoever in the household completed the questionnaire, rather than on sequential

Table 4.2 Major Occupation Group in 1971 Survey Week, by Major Occupation Group in 1966 Survey Week and Race^a
(Percentage distribution)

Major occupation group in 1966	Total number of respondents	Major occupation group 1971								
		Total percent	Professionals, technicians	Managers	Clerical and sales workers	Craftsmen	Operatives	Nonfarm laborers	Service workers	Farm workers
WHITES										
Professionals, technicians	178	100	80	11	5	4	0	0	0	0
Managers	217	100	7	71	11	9	1	b	2	0
Clerical/ sales workers	179	100	8	17	62	5	5	2	1	0
Craftsmen	453	100	2	5	2	80	8	2	1	0
Operatives	327	100	0	3	4	14	72	4	3	1
Nonfarm laborers	61	100	0	2	5	0	30	56	6	2
Service workers	91	100	0	4	1	2	6	6	81	0
Farm workers	32	100	0	0	3	0	15	0	3	78
BLACKS										
Professionals, technicians	22	c	c	c	c	c	c	c	c	c
Managers	9	c	c	c	c	c	c	c	c	c
Clerical/ sales workers	36	100	3	7	56	10	9	15	0	0
Craftsmen	94	100	4	1	4	64	10	9	7	1
Operatives	196	100	0	b	2	12	72	11	3	b
Nonfarm laborers	108	100	0	1	5	0	24	53	17	1
Service workers	94	100	0	0	7	0	7	7	78	2
Farm workers	42	100	0	0	0	8	2	12	8	71

a Respondents 50 to 64 years of age in 1971 who were not retired from their "regular" job as of 1966 or 1971, who were employed as wage and salary workers in both the 1966 and 1971 survey weeks and who were nonmigrants between 1966 and 1971.

b Between 0.1 and 0.5 percent.

c Percentage distribution not shown where base contains fewer than 25 sample cases.

rate of mobility between major occupation groups of about 17 percent (Table 4A-2) as compared to the approximately 25 percent rate from the NLS--a difference that may very well be accounted for by the differences between the data sets. Moreover, the NLS and Census data indicate similar patterns of occupational change, e.g., both show professionals to be the most immobile and nonfarm laborers to be the most mobile. The greatest disparity is that the NLS data imply that about 40 percent of the middle-aged men whose base-year job was in clerical or sales work changed major occupation groups during the five years, whereas the comparable rate based on the Census data is 17 percent. Finally, it is of interest to note that the Census data corroborate the NLS finding of relatively high occupational stability among middle-aged service workers; indeed, this is the most stable occupational category for black men according to both the NLS and Census transition matrices.

III CONCEPTUAL FRAMEWORK

Probability of Upward Occupational Mobility

In our investigation of the probability of an upward occupational shift we posit several sets of determinants. First, assuming that upward mobility is a response by individuals to occupational differentials in rewards, the probability of securing those differentials is expected to depend on an individual's attributes (stock of human capital resources, both mental and physical) which determine his value in the labor market. Thus, other things being equal (including the level of initial occupational achievement) it is hypothesized that the probability of an upward occupational change will rise with the level of an individual's human capital resources. Second, given an individual's level of resources, the probability of an upward change in occupation is hypothesized to be negatively related to the base-year level of occupational achievement. This hypothesis can be justified on several grounds, the most obvious of which is the regression-toward-the-mean phenomenon, i.e., that the higher one begins on the occupational pyramid, the fewer vacancies (opportunities) there are in the labor market which would provide greater rewards. Another plausible justification is that there may be systematic errors in the measurement of occupational level such that high recorded levels overstate and low recorded levels understate the true levels of

reports of occupation by the individual whose behavior is under study; the Census data include men who were self-employed, rather than only wage and salary workers; and the Census data refer to the period 1965-1970, rather than 1966-1971. The principal points of similarity are that both the Census and NLS data refer to mobility over a five-year span, both refer to males 50 to 64 years of age, and both permit separate analysis by race.

occupation. Irrespective of the basis for the hypothesis, it is clear that base-year occupational level and measures of human capital resources must simultaneously enter the analysis of occupational change. That is, while the base-year level of occupation and human capital resources should be correlated strongly and positively, their net independent effects on the probability of upward occupational change are expected to be of opposite sign.¹⁵

A third set of determinants might be termed constraints on the likelihood of an upward occupational change which are associated with individual attitudes or behavior. Although it is possible to conceive of these constraints as characterizing the individual, they may to some degree reflect market and institutional forces. For example, one of this set of determinants is age, obviously an individual trait. Yet, the hypothesis that age is inversely related to the probability of upward occupational change may derive from any or all of the following lines of reasoning. First, it has been theorized that, with increasing age, there is a general decline in the psychological tendency to change one's situation, irrespective of other factors.¹⁶ Second, the older individual probably has a lower propensity to change because of the shorter period of time during which he would be able to collect returns from the occupational shift. Third, there may well be active discrimination by employers against older workers, which both inhibits the movement of those who desire to move and, if the discrimination is perceived by workers, lowers the propensity of older workers to move. Race is another trait which is clearly a personal characteristic but whose effects on occupational change doubtless represent an interplay of personal and institutional forces. Thus, our hypothesis that black men will, *ceteris paribus*, exhibit a lower probability of upward movement than white is based primarily on the presumption that racial discrimination directly inhibits the upward mobility of blacks.¹⁷

Another personal trait hypothesized to affect the likelihood of upward mobility is the worker's perception of whether his base-year occupation is the best of his career. On the one hand, if the

¹⁵If either base-year occupation or level of human capital were omitted, its effect would be partially transmitted by the other and would suppress the "true" effect of the other.

¹⁶See Sorenson (1972), p. 47.

¹⁷Of course, unless the model is completely specified, the variable race may represent other black-white differences which cause a divergence in the probability of upward movement.

middle-aged worker believed in 1966 that he was in the best occupation of his career he might be less inclined to strive for upward mobility. On the other hand, if a man reports that his 1966 and best occupations were different, his dissatisfaction might dispose him to change lines of work even at the expense of a decline in occupational status. We are interested in ascertaining whether both of these effects prevail.

An additional set of variables expected to have effects on the likelihood of upward occupational movement represents aspects of the labor market behavior of the worker during the five-year interval. More specifically, it is hypothesized that the process (and probability) of upward occupational change is different for men who change employers during the period than for those who remain with the same firm. Nearly all previous research that has examined several types of mobility simultaneously has found that "... most job changes are 'complex,' i.e., that when a worker changes employers he more often than not also changes either his occupation, his industry or both."¹⁸ Additionally, the recently reawakened interest of economists in "internal labor markets" argues for distinguishing between occupational change within and between firms.¹⁹

Among men who did not change employers, those who were active in the job market and secured alternative job offers are hypothesized to be more likely to be promoted. That is, the greater initiative and improved "bargaining" position exemplified by this behavior are expected to enhance the probability of occupational upgrading. It is also of interest to examine whether there are any differences in occupational mobility among this group of men according to whether they work in the public or private sector of the economy. On the one hand, there may be institutionalized employment relations in the government sector which differ from those in the private sector, especially with respect to the scheduled regularity of occupational upgrading. On the other hand, reduced opportunities for occupational advancement in government service may be a trade-off for the greater security of such jobs. Among men who did change employers during the five years, it is expected that those

¹⁸Parnes (1970), p. 40.

¹⁹The beginning of this reawakening is probably best represented by Doeringer and Piore (1971). The earlier, classic study which suggested that the most common form of labor mobility occurred within the firm is Reynolds (1951). On the other hand, Adams and Aronson (1957) find more occupational movement among men who changed firms, but they also note the hypothesis by Reiss that the likelihood of change in occupational level will be greater for men who stay with an employer than for those who change firms, p. 147.

who did so voluntarily are more likely than those who changed involuntarily to have moved up the occupational ladder. That is, voluntary interfirm movers are assumed to have been more successful in maximizing their rewards from working, one of which is occupational position.

Finally, because both inter- and intra-firm occupational shifts occur in the context of prevailing labor market conditions, it is expected that the probability of upward mobility will depend on characteristics of the local labor market.²⁰ First, it is hypothesized that available opportunities for an upward occupational change should be greater the larger the local labor force.²¹ Second, the tighter the local labor market (i.e., the lower the rate of unemployment), the greater ought to be the chances for occupational upgrading. Third, it is hypothesized that labor markets which are more industrially diversified offer more opportunities for occupational advancement than do those in which economic activity is highly concentrated industrially. In addition, it is expected that local labor market conditions will display greater effects on the probability of upward occupational mobility among men who changed employers than among those who did not.

Probability of Downward Occupational Mobility

In some ways downward occupational change can be thought of as the converse of upward change. However, among middle-aged men the substantive implications of not progressing upward are rather different from the implications of moving downward. Whereas the former indicates that a man has reached his career peak and is holding his own, the latter indicates that he is slipping down the career ladder--with substantially more serious consequences for his self-image and his material welfare. Certainly, the men who move downward are far more likely to be viewed as failures by society.

Notwithstanding the differing reasons for studying upward and downward occupational change, essentially the same model is hypothesized to explain the probability of downward mobility. Thus, for reasons presented above, the base-year level of occupational achievement is

²⁰For evidence that this applies to internal as well as external labor markets, see Gitelman (1966), p. 60.

²¹Because of the small amount of geographic movement among these men and the complexity of dealing with interactions among the several types of change, this study focuses only on nonmigrants. For an analysis of migration among these men, see Schwartz and Nestel (1974).

expected to be positively related to the likelihood of downward movement and the base-year level of human capital is hypothesized to have a net negative effect on the probability of occupational downgrading. For reasons that have been mentioned earlier, it is anticipated that the net effect of age on the likelihood of downward mobility will be positive. Because one form that racial discrimination in the labor market may assume is more bumping and occupational downgrading of blacks than of whites, *ceteris paribus*, it is hypothesized that being black will be positively associated with the probability of a downward occupational shift. As discussed above, the direction of the relationship between the probability of occupational change and a worker's perception of whether his 1966 and best occupations were identical is not clear a priori.

For reasons analogous to those described above, it is anticipated that changing employers will be related to the likelihood of occupational downgrading. Additionally, men who changed employers voluntarily should be less likely than those who did so involuntarily to accept an occupational demotion. Likewise, among men who remained with the same employer, those who received and rejected alternative job offers during the period are expected to have a lower probability of being demoted within the firm. Finally, characteristics of the local labor market are also hypothesized to influence the probability of a middle-aged worker moving down the occupational ladder, with the probability being greater for those who live in small areas, in industrially concentrated areas, and in areas with high unemployment rates.

Distance of Occupational Mobility

One of the obvious potential consequences of occupational change is an alteration in status (prestige). It is only potential because some changes in occupational assignment are lateral--i.e., involve no change in an individual's location in the social hierarchy. Our analysis of the distance of occupational movement is confined to members of the sample who changed occupations (including the laterally mobile) in order to evaluate the determinants of net positional change on the social ladder produced by occupational mobility. While this involves some duplication of the analyses of upward and downward mobility, it adds the dimension of amplitude of change. The model used to explain the probability of an upward (downward) occupational shift is equally applicable to investigating the distance of a shift, and need not be repeated here.

Returns to Occupational Mobility

In order to investigate the "payoff" to occupational mobility, we focus on changes in two measures of labor market success, namely earnings and level of job satisfaction. Change in each of these measures is hypothesized to depend upon a host of personal and environmental characteristics, as well as upon occupational change. Only by holding constant these other characteristics, which themselves are hypothesized

determinants of mobility, it is possible to assess the magnitude of the net returns to occupational change. By and large, the "control" variables in the models are those which have been enumerated above in the analysis of the probabilities of upward and downward movement. For example, since human capital resources are assumed to influence both the improvement in earnings and the likelihood of occupational mobility, they must be held constant in order to estimate the net impact of mobility on earnings growth. In general, men who progressed up the occupational ladder are expected to show greater gains in earnings and satisfaction than those who were occupationally immobile, and the latter, in turn, are expected to exhibit larger improvements than those men who moved down occupationally.

IV RESULTS OF THE MULTIVARIATE ANALYSIS

Introduction

Having described in Section II the broad contours of occupational mobility among middle-aged wage and salary workers during the 1966-1971 interval, the remainder of the study is devoted to testing empirically the hypotheses about mobility presented above. The statistical technique utilized is multiple linear regression. In the analysis of the likelihood of moving up or down the occupational ladder we essentially will be estimating the parameters of a linear probability function.²² Although it is clear that the relationship between, say, the likelihood of upward mobility and the set of determinants is neither linear nor purely additive, neither theory nor previous empirical work indicates what the appropriate mathematical specification of the relationship should be. In order to investigate some nonlinearities and interactions, we have specified several additive equations containing quadratic terms and qualitative variables for several strata of the total universe (the stratification being equivalent to specifying interactions between the stratification variables and the other determinants of mobility). The details of the specifications are enumerated below.

Probability of Upward Occupational Mobility

The probability of being upwardly mobile is operationalized as a dichotomous variable [MOBUP] which assumes the value "1" if a worker changed occupations in an upward direction between 1966 and 1971, and

²²Because these models employ dichotomous dependent variables probit-logit analyses also have been performed and comparisons to ordinary-least-squares regression results are reported at the relevant points below.

"0" if he did not. The initial determination that an individual changed occupations is based on a comparison of the three-digit Census occupation codes in 1966 and 1971. The determination that the occupational move was upward is based on the sign of the difference between the Duncan index²³ scores of the occupations, i.e., if the 1971 score minus the 1966 score is greater than zero, the move is defined as upward.

However, the several sources of potential measurement error²⁴ inherent in this procedure dictated two additional steps to refine the variable. The first was to restrict the universe for study to men who were "nonretired" throughout the five years²⁵ in order to eliminate the "spurious" occupational mobility that would be registered when a respondent "retired" from his career occupation but continued to be an active (usually part time) participant in the labor force. Second, the verbal descriptions of the 296 occupations in the 1960 classification scheme of the Census were reviewed to identify the pairwise comparisons of three-digit codes which would not be accepted as "legitimate" instances of occupational change.²⁶ In all, these steps resulted in the loss of about 400 cases.

²³The Duncan index is a two-digit socioeconomic status score assigned to each three-digit occupation in the Census classification scheme. For details on the construction of the index see Duncan (1961).

²⁴Despite the ostensibly objective method of measuring occupational change by comparing the respondent's report at different points in time, there remain several potential sources of measurement error. Among these are the following: (1) differing specificity over time in the respondent's description of the kind of work or industry of employment, (2) different probing questions at different interviews and (3) coding and/or keypunch errors following one or both surveys. In the 1969 and 1971 surveys the employed respondents were asked to identify their most important duties and their job title as well as the kind of work they performed. However, in the 1966 and 1967 surveys only the last item was included in the questionnaire. Although the additional queries had the laudable goal of improving the precision of occupation coding, they doubtless had the unintended side effect of creating some spurious occupational change.

²⁵For details on the definition of the term "nonretired," see footnote 8.

²⁶Exemplary of the groups of such pairwise comparisons are the following, with Census code numbers in parentheses: engineer, mechanical (085) and engineer, n.e.c. (093); any specified professional or technical job (000-194) and professional, technical worker, n.e.c. (195); any specified professional or technical job (000-194) and any

Explanatory variables The hypothesized determinants of upward occupational mobility are operationalized in the following manner. Occupational achievement level in the base year is represented by Duncan's index of socioeconomic status [OCC66],²⁷ a widely used measure that has been shown to be highly stable over time.²⁸ As has been indicated, it is expected that the net partial regression coefficient of OCC66 will be negative. Because there are many human capital resources affecting an individual's value in the market, we employ several variables to represent this construct. The first is the actual number of years of formal schooling completed [EDUC], whose regression coefficient is expected to have a positive sign. Second, we introduce a series of binary variables denoting whether and when the respondent received vocational training outside of formal schooling, i.e., training only prior to 1966 [TRN66], training only between 1966 and 1971 [TRN71], training both prior to and subsequent to 1966 [TRNBTH]. Since the reference group is those without any training, the regression coefficients of all three variables are expected to be positive.²⁹

operative (601-775) or nonfarm laborer job (960-985). Since it was impossible to ascertain which, if either, of the two occupations in such pairs was accurate, it was decided to eliminate from the analysis all observations with "illegitimate" occupation shifts. The validity of these decisions is strengthened by the comparison between the result of having made them and the data from the decennial Census in Section II above. For example, in nearly every instance of crossing one-digit occupation lines which we classified as "illegitimate" a priori, the Census data record a frequency of occurrence of less than 1 percent.

²⁷In the single study of occupational change that uses a conceptual and methodological framework similar to the one we employ, a measure of prestige is also used to represent the effect of occupational level in the base year. See Sorenson (1972), p. 51.

²⁸See Hodge, Siegel and Rossi (1964).

²⁹Of course, there is some ambiguity about the causal direction in the relationship between the acquisition of training and the probability of upward mobility, because neither variable is dated within the 1966-1971 period. That is, a positive relationship may be evidenced either because men who get training are more likely to move upward or because an upward change in occupational assignment is likely to require subsequent training. On the selectivity of occupational training see also Chapter Two of this volume.

Third, we employ a binary variable to represent the respondent's state of physical health in 1966 [HEALTH]. Because those without any health limitations are coded "1," the anticipated sign of the coefficient is positive. Fourth, in order to represent the extent of firm-specific skills and the fact that length of service is frequently used as a criterion for access to promotion openings, we introduce the actual number of years of service with the 1971 employer³⁰ and the square thereof [TENURE, TENRSQ]. The quadratic form of tenure is introduced to test whether its effect is monotonic, e.g., whether there is some threshold after which seniority no longer makes a difference.³¹ Since we hypothesize that the effect of length of service will diminish after some level of seniority is attained, the expected signs of the coefficients of TENURE and TENRSQ are positive and negative, respectively. The final measure of human capital resources is a binary variable denoting marital status [MSP71], where men who are married, wife present are coded "1." This variable may be seen to represent the psychological traits of stability and motivation and/or the selectivity effect of marriage (i.e., that marriage indicates ability differences not measured by other variables). Hence, the regression coefficient is expected to have a positive sign.³²

In order to test the effect of inter-firm movement on the probability of upward occupational mobility we stratify the sample into those who were with the same employer in 1966 and 1971 and those who were not.³³

³⁰For men who did not change employers over the five years it is immaterial whether we use 1966 or 1971 tenure. However, for those who changed employers, tenure with the 1971 employer seems most relevant for assessing the probability of progress.

³¹Although the assumption of a parabolic relation between tenure and the probability of upward movement is arbitrary, it seems less arbitrary than testing for nonmonotonicity by a series of binary variables denoting some ad hoc ranges of tenure.

³²For discussion of the effect of marital status on occupational careers see Blau and Duncan (1967), p. 359; Duncan, Feathermore and Duncan (1968), p. 255; Sorenson (1972), p. 81.

³³In actuality, the sample was initially stratified into three groups, i.e., those not changing employers, those leaving the 1966 job voluntarily and those leaving involuntarily. Application of Chow's test of equality of regression coefficients resulted in pooling the latter two groups. See Chow (1960). That is, the test led to the conclusion that whatever effect voluntariness of employer changing has on occupational mobility in middle age can be represented by an additive, binary variable in an equation representing all employer changers, viz. VOLUNT. The Chow test (for the combined racial groups) yielded an F ratio of 0.63, where the critical value for F for rejecting the null hypothesis of equality is 1.75 at $\alpha = .05$.

The regression equation for those men who changed firms also includes a binary variable [VOLUNT] which is coded "1" if the respondent left his 1966 employer voluntarily. Hence, the variable is expected to have a positive coefficient. The regression equation for those not changing firms contains two binary variables to represent determinants of intra-firm promotions. The first is a variable [ALTJOB] coded "1" if the respondent received and rejected the offer of an alternative job during the five years, which is expected to have a positive coefficient. The second is a variable included to examine public sector/private sector differences in promotion [PVT66] and is coded "1" if the worker was in the private sector and "0" if he was a government employee.

The respondent's perception of whether his 1966 and best occupations were identical is represented by a dichotomous variable [BESTOC] which is coded "1" if the worker perceived the occupations to be different. The age of the respondent is treated as a continuous variable representing actual years of age [AGE]. In order to examine the effect of race on upward occupational mobility, we first tested for interactions between race and the other explanatory variables by stratifying according to race and generating separate estimates of the regression parameters. Since the Chow test for equality of regression coefficients led to the conclusion that the two groups might legitimately be pooled,³⁴ a binary variable [RACE] has been used in the equations. This is coded "1" if the respondent is black, and the expected sign of its coefficient is negative.

Finally, the three characteristics of the local labor market are represented as follows: the size of the civilian labor force in 1960 (measured in tens of thousands) [MKTSIZ], the 1960 rate of unemployment in the local area (measured in percentage points) [UNRATE], and an ordinal index of the extent of industrial diversification of the area in 1960 (low scores denote diversified areas and high ones denote concentrated areas) [INDDIV].³⁵ The conceptual framework and methods of measurement

³⁴This particular application of the technique required the estimation of nine separate equations--i.e., three (whites, blacks, and total) each for voluntary employer changers, involuntary changers, and nonchangers. The respective calculated F ratios were 0.27, 1.62, and 0.73 where the critical values of F for rejection of the null hypothesis at $\alpha = .05$ are 1.70, 1.76, and 1.79, respectively.

³⁵These three variables characterize the local labor market conditions faced by these men as of only one point in time because geographic movers have been excluded from the analysis. The latter were excluded because of very small sample sizes and the obvious need to test for interactions among the several forms of mobility--interfirm,

lead to the expectation of a positive coefficient for MKTSIZ, and negative coefficients for UNRATE, and INDDIV.

Equations (4.1a) and (4.1b) below summarize the set of hypotheses enumerated in the conceptual framework and indicate the specific functional forms of the equations which are estimated by regression analysis. The means and standard deviations of the variables used in analyzing upward occupational mobility are contained in Table 4A-3.

(4.1a) Same employer 1966 and 1971

$$\begin{aligned} \text{MOBUP} = & \beta_0 + \beta_1 \text{OCC66} + \beta_2 \text{EDUC} + \beta_3 \text{TRN66} + \beta_4 \text{TRN71} \\ & \quad (-) \quad (+) \quad (+) \quad (+) \\ & + \beta_5 \text{TRNBTH} + \beta_6 \text{HEALTH} + \beta_7 \text{TENURE} + \beta_8 \text{TENRSQ} \\ & \quad (+) \quad (+) \quad (+) \quad (-) \\ & + \beta_9 \text{MSP71} + \beta_{10} \text{PVT66} + \beta_{11} \text{ALTJOB} + \beta_{12} \text{AGE} \\ & \quad (+) \quad (?) \quad (+) \quad (-) \\ & + \beta_{13} \text{BESTOC} + \beta_{14} \text{RACE} + \beta_{15} \text{MKTSIZ} + \beta_{16} \text{UNRATE} \\ & \quad (?) \quad (-) \quad (+) \quad (-) \\ & + \beta_{17} \text{INDDIV} \\ & \quad (-) \end{aligned}$$

(4.1b) Different employer 1966 and 1971

$$\begin{aligned} \text{MOBUP} = & \beta_0 + \beta_1 \text{OCC66} + \beta_2 \text{EDUC} + \beta_3 \text{TRN66} + \beta_4 \text{TRN71} \\ & \quad (-) \quad (+) \quad (+) \quad (+) \\ & + \beta_5 \text{TRNBTH} + \beta_6 \text{HEALTH} + \beta_7 \text{TENURE} + \beta_8 \text{TENRSQ} \\ & \quad (+) \quad (+) \quad (+) \quad (-) \\ & + \beta_9 \text{MSP71} + \beta_{10} \text{VOLUNT} + \beta_{11} \text{AGE} + \beta_{12} \text{BESTOC} \\ & \quad (+) \quad (+) \quad (-) \quad (?) \\ & + \beta_{13} \text{RACE} + \beta_{14} \text{MKTSIZ} + \beta_{15} \text{UNRATE} + \beta_{16} \text{INDDIV} \\ & \quad (-) \quad (+) \quad (-) \quad (-) \end{aligned}$$

Regression results The empirical estimates of the parameters of Equations (4.1a) and (4.1b) are displayed in Table 4.3. Insofar as

interoccupation, and interarea. Admittedly, even this cleansing operation does not fully purify the data since, for example, there may be an association between the probability of occupational change and the growth (decline) in the local labor market, where the latter is not captured in our data. Use of the 1960 data rather than, say, 1965 or 1966 data characterizing the local labor market seems to be justifiable in view of the long run stability of relative rankings of the areas. See Parnes et al. (1970), p. 17.

Table 4.3 Regressions Relating the Likelihood of Upward Occupational Mobility 1966-1971 to Selected Explanatory Variables, by Comparison of Employers 1966-1971^a (t-ratios)
(Coefficients shown in percentage points)

Explanatory variable ^b	Same employer	Different employer
OCC66	- 0.3 (-6.78)***	- 0.7 (-4.84)***
EDUC	2.0 (5.63)***	1.6 (1.47)*
TRN66	- 2.1 (-0.97)	6.0 (0.98)
TRN71	9.0 (1.91)**	12.3 (1.18)
TRNBTH	3.7 (1.20)	- 0.4 (-0.04)
HEALTH	- 0.4 (-0.17)	11.0 (1.57)*
TENURE	- 0.4 (-0.99)	4.4 (2.16)**
TENRSQ	0.01 (1.15)	- 0.3 (-2.11)**
MSP71	7.0 (2.04)**	- 8.3 (-0.92)
PVT66 ^c	6.0 (2.50)**	d
ALTJOB	- 1.6 (-0.66)	d
VOLUNT	d	1.9 (0.35)
AGE	- 0.5 (-2.00)**	0.3 (0.41)
BESTOC	6.9 (3.38)***	6.7 (1.28)*
RACE	0.3 (0.08)	- 3.1 (-0.30)
MKTSIZ	- 0.0 (-0.08)	0.0 (0.88)
UNRATE	0.0 (1.45)	0.0 (0.50)
INDDIV	0.1 (0.57)	0.1 (0.31)
Constant	16.8 (1.09)	2.3 (0.06)
$\bar{R}^2$	.051	.071
F-ratio	5.56	2.46
Number of respondents	1,444	308

- a Respondents 50 to 64 years old in 1971 who (1) were not retired in 1966 or 1971, (2) were nonmigrants between 1966 and 1971, and (3) were employed wage and salary workers in 1966 and 1971.
- b For a detailed description of the explanatory variables see text, pp. 129-131.
- c Because there is no directional hypothesis for this variable, two-tailed tests of statistical significance are applied.
- d Variable does not enter this equation.
- *** Significant at $\alpha \leq .01$.
- ** Significant at $\alpha \leq .05$.
- * Significant at $\alpha \leq .10$.

they explain less than 10 percent of the variance in the probability of an upward occupational shift, these results are somewhat disappointing. However, the low values of $\bar{R}^2$ were not entirely unexpected.³⁶ First, despite our best efforts, there is apparently considerable measurement error remaining in MOBUP, the dependent variable. Even if one assumes that this error is essentially random, the amount of "noise" in the dependent variable produces artificially low explanatory power for the equation. Second, ordinary least-squares regression analysis of dichotomous dependent variables with micro-data characteristically yields low explanatory power.³⁷

Overall, men who changed employers between 1966 and 1971 were significantly ($\alpha < .001$) more likely than others to have moved up the occupational ladder (Table 4A-3). When the sample is stratified into those who changed employers and those who did not (Table 4.3) it is apparent that this difference is due largely to differences in the processes of intra- and inter-firm upward occupational mobility. That is, some hypothesized determinants are statistically significant only for the group of middle-aged men who did not change employers (e.g., AGE) and others are significant only for job changers (e.g., TENURE).³⁸ Additionally, even when a variable is significant for both groups of men, the magnitude of its effect is not necessarily the same.

For example, the constraining effect of base-year occupational status on the likelihood of upward mobility seems to be about twice as

³⁶The low values of $\bar{R}^2$ are not attributable to the degrees of freedom lost by including a large number of regressors--i.e., the unadjusted coefficients of determination are .062 and .119, respectively, for the equations.

³⁷In the preliminary stages of this research we experimented with the application of probit/logit analysis to the unweighted data (for whites only), and the explanatory power of the model was noticeably greater--i.e., the $\bar{R}^2$ was about twice as high. There are several reasons that we show only the ordinary least-squares (OLS) results. First, explanatory power is not a major focus of this study, and even if it were, the pseudo- R^2 's of the probit/logit analyses are still low (approximately .12 to .19) by conventional standards. Second, the available computer program for OLS analysis provides more, useful statistics. Third, the OLS and probit/logit analyses yield identical qualitative inferences regarding the individual determinants of upward mobility.

³⁸Since the variables included in the models were not identical, Chow tests cannot be applied.

large for men who changed employers as for those who did not. The implication of this is quite clear. The higher a middle-aged man begins on the occupational ladder, *ceteris paribus*, the less likely he is to move up the ladder especially if he changes employers. To take another example, the TENURE variables are significant only in the equation for the employer changers. Since tenure (with the 1971 employer) for this group reflects the timing of the inter-firm shift, its significance may represent the effects of changes in the state of the general economy on occupational mobility. That is, those with longer tenure changed employers during a period of relative prosperity (i.e., 1966-1968) while those with shorter tenure moved during a period of accelerating inflation (i.e., 1969-1971) and rising unemployment.

In general, there is convincing evidence that, holding base-year occupation constant, the level of human capital resources of an individual is positively related to the likelihood of an upward occupational change. The most consistent support for this hypothesis derives from the performance of the variable EDUC, but some additional support comes from the variables representing the acquisition of formal vocational training, tenure, and state of physical health. Attesting to the importance of personal motivation as a determinant of upward mobility, the coefficient of BESTOC is statistically significant, irrespective of whether a man changed employers during the five years. That is, if the worker perceived his 1966 occupation to be other than the best of his working life he was more likely than his more occupationally-contented counterpart to move up the occupational ladder. These results support our hypothesis about dissatisfaction with work assignment being a spur to upward movement, but they do not deny the possibility that dissatisfaction may also dispose a worker to accept a new line of work even if it has lower status. A test of the latter hypothesis must await the analysis of downward mobility.

The remaining variables that exhibit a significant relation to upward occupational change seem to operate solely in the sphere of intra-firm mobility. First, married men who remained with the same employer enjoyed a significantly greater likelihood of promotion than their nonmarried counterparts. Whether this is interpreted as a reflection of a selectivity effect of marriage or of a stronger motivation to pursue advancement among men with greater financial obligation,³⁹ it is not clear why the effects should prevail only in the case of intra-firm advancement.

³⁹The results also are consistent with some sociological theories about the effect of wives on their husband's career. For example, Papanek (1973) concludes that "The kinds of contributions which wives in these careers make to their husbands' work thus include status maintenance . . ." (p. 101). By implication, unmarried men in certain occupations have less assistance in rising in the corporate hierarchy. See also Whyte (1951).

Second, middle-aged men employed in the government sector are significantly less likely than their counterparts in the private sector to be promoted. While this is consistent with the hypothesis that workers who enter government service trade off advancement opportunities for job security, it may also be interpreted as an indication that private sector employees wait longer for promotion than do government workers--i.e., that the latter have, by middle age, already advanced as far as they can go. Third, the regression results provide only weak support for the notion that age per se is a deterrent to occupational change at least within the narrow age range of our sample. Among those remaining with the same employer over the period, each additional year of age reduces the probability of an upward occupational shift by only one-half of a percentage point.

It is also worthy of mention that several hypotheses about the causes of upward occupational change among middle-aged men receive no support from the data. None of the characteristics of the local labor market exhibit a significant association with the dependent variable, nor does it appear that receipt and rejection of an alternative job offer (i.e., ALTEJOB) enhance a worker's chances of promotion. Likewise, men who changed employers voluntarily were no more likely to be upwardly mobile than were those who left their employers involuntarily. Finally, neither the inclusion of a binary variable representing race nor the stratification of the equations according to race provides any evidence that middle-aged black men were less likely than their white counterparts to move up the occupational ladder between 1966 and 1971.⁴⁰

Probability of Downward Occupational Mobility

As indicated earlier, the same statistical model has been used to investigate the determinants of both upward and downward occupational mobility. The probability of being downwardly mobile is operationalized as a dichotomous variable [MOBDWN] which assumes the value "1" if a worker changed occupations in a downward direction between 1966 and 1971, and "0" if he did not. Thus, the analysis is perfectly analogous to that of MOBUP. All of the hypothesized relationships between MOBDWN and the explanatory variables are the opposite of those summarized in Equations (4.1a) and (4.1b), except in the cases of the two variables whose effects on the direction of movement are theoretically ambiguous.⁴¹

⁴⁰See footnote 33. It should, perhaps, be noted that while the sign of the RACE variable in the equation for interfirm movers is as predicted, the coefficient is only about one-third as large as its standard error.

⁴¹For details of constructing MOBUP see pp. 127-128 above. The two variables with ambiguous effects are PVT66 and BESTOC. For the former we simply permit the data to indicate whether there is a

Regression results It is evident that downward occupational mobility is legitimately cast as one of the work-life problems of middle-aged men. About three in every ten men who changed employers during the five-year period under study moved down the occupational ladder, and the corresponding proportion for those who remained with the same employer is one in ten (Table 4A-3). Turning to the regression results, some of the findings are symmetrical with those for upward mobility.⁴² For example, the regression-toward-the-mean phenomenon is identical in both sets of equations (Tables 4.3 and 4.4). Also, the negative effect of educational attainment on downward mobility (Table 4.4) is nearly the same as its positive effect on upward movement (Table 4.3). The regression coefficients for the variable BESTOC confirm the second part of the hypothesis about occupational discontent--i.e., that dissatisfaction with a line of work disposes a middle-aged man to change occupations even if it means a decline in status. The absence of significant regression coefficients for the variable AGE is also consistent with our previous findings, although there the relationship was significant, albeit small, for men who had not changed employers. Finally, once again we are unable to discern significant racial differences in the probability of occupational change.

However, not all of the factors associated with downward mobility are symmetrical with those producing upward movement. For example, among men who did not change employers between 1966 and 1971, length of service with a firm does provide a buffer against demotion and bumping, in contrast with our finding that it does not significantly increase the probability of promotion. Other differences between the determinants of upward and downward movement are found among men who did not change employers during the five years. Evidently, the existence of a large number of alternative jobs (see MKTSIZ in Table 4.3) and personal activity in seeking them (see ALTJOB) do provide a middle-aged man with a bargaining position which protects him from demotion, even though they do not significantly alter his chances of promotion.

nonzero effect and apply two-tailed tests of significance. For the latter we posit a positive effect both on MOBUP and on MOBDWN.

⁴²As was done when MOBUP was the dependent variable, Chow tests were used to investigate interactions between RACE and other variables as they affect MOBDWN. The calculated F-ratios analogous to those in footnote 34 were 0.93, 1.54 and 1.07--all below the critical values for rejection. Similarly, we are unable to reject the hypothesis that VOLUNT does not interact with other variables (calculated $F = 1.63$). See also footnote 33.

Table 4.4 Regressions Relating the Likelihood of Downward Occupational Mobility 1966-1971 to Selected Explanatory Variables, by Comparison of Employers 1966-1971^a
(t-ratios)

(Coefficients shown in percentage points)

Explanatory variable ^b	Same employer	Different employer
OCC66	0.3 (6.91)***	0.7 (4.68)***
EDUC	- 1.6 (-5.23)***	- 2.0 (-1.82)**
TRN66	- 0.8 (-0.41)	-13.6 (-2.17)**
TRN71	- 1.5 (-0.36)	0.4 (0.04)
TRNBTH	- 1.0 (-0.37)	-11.8 (-1.25)
HEALTH	2.5 (1.10)	- 4.3 (-0.60)
TENURE	- 0.8 (-2.51)***	- 0.8 (-0.41)
TENRSQ	0.02 (2.04)**	- 0.0 (-0.15)
MSP71	0.3 (0.11)	- 6.9 (-0.74)
PVT66 ^c	0.7 (0.35)	d
ALTJOB	- 3.9 (-1.79)**	d
VOLUNT	d	3.2 (0.58)
AGE	- 0.2 (-0.72)	0.0 (0.05)
BESTOC	6.2 (3.52)***	7.7 (1.44)*
RACE	1.8 (0.59)	3.8 (0.36)
MKTSIZ	- 0.02 (-2.82)***	- 0.01 (-0.55)
UNRATE	0.0 (-1.03)	0.0 (0.87)
INDDIV	- 0.2 (-1.34)	- 0.3 (-0.65)
Constant	35.8 (2.67)***	39.3 (0.96)
$\bar{R}^2$	.042	.057
F-ratio	4.72	2.16
Number of respondents	1,444	308

- a Respondents 50 to 64 years old in 1971 who (1) were not retired in 1966 or 1971, (2) were nonmigrants between 1966 and 1971, and (3) were employed wage and salary workers in 1966 and 1971.
- b For a detailed description of the explanatory variables see text, pp. 129-131.
- c Because there is no directional hypothesis for this variable, two-tailed tests of statistical significance are applied.
- d Variable does not enter this equation.
- *** Significant at $\alpha \leq .01$.
- ** Significant at $\alpha \leq .05$.
- * Significant at $\alpha \leq .10$.

Distance of Occupational Mobility

We turn now to an examination of the distance of the occupational changes made by the occupationally mobile middle-aged men. We measure distance [ΔOCC] as the arithmetic difference between occupational status in 1971 and occupational status in 1966 (1971 minus 1966), using Duncan's index as the measure of status. Thus, upward mobility is recorded as a positive difference and downward mobility as a negative difference. Because there are more three-digit occupations than Duncan index scores, we also record "lateral" mobility--i.e., those occupational shifts which yield no difference in status scores.⁴³ Although our focus is narrowed to the occupationally mobile, we employ nearly the same statistical model as we used in analyzing the probabilities of upward and downward movement. The two principal differences stem from the finding of (1) significant interactions between race and the other determinants of distance men who did not change employers and (2) significant interactions between reason for changing employer and the other determinants of distance among men who changed employers.⁴⁴ Therefore, the parameters of Equation 4.2a below were estimated separately for whites and blacks, the parameters for Equation 4.2b were estimated separately for voluntary and involuntary employer changers.

⁴³For the four groups shown in Table 4A-4 the proportions who were laterally mobile are 3.3, 5.1, 3.8, and 1.5 percent.

⁴⁴In the first instance the calculated F was 2.71, significant at $\alpha < .01$. In the second instance the calculated F was 2.11, also significant at $\alpha < .01$. However, there was no race interaction evident in the case of employer changers (i.e., for voluntary and involuntary movers the calculated F ratios were 1.08 and 1.02, respectively). The other two differences in the equations shown in Table 4.5 are that TENRSQ and BESTOC are omitted. The first of these was actually tested but its collinearity with TENURE in the substantially reduced samples argued for its deletion. The second variable was omitted because it had shown significantly positive relations with both directions of mobility, as hypothesized, and testing for its net effect was of no interest.

(4.2a) Same employer 1966 and 1971

$$\begin{aligned}\Delta\text{OCC} = & \beta_0 + \beta_1 \text{OCC66} + \beta_2 \text{EDUC} + \beta_3 \text{TRN66} + \beta_4 \text{TRN71} \\ & \quad (-) \quad (+) \quad (+) \quad (+) \\ & + \beta_5 \text{TRNBTH} + \beta_6 \text{HEALTH} + \beta_7 \text{TENURE} + \beta_8 \text{MSP71} \\ & \quad (+) \quad (+) \quad (+) \quad (+) \\ & + \beta_9 \text{PVT66} + \beta_{10} \text{ALTJOB} + \beta_{11} \text{AGE} + \beta_{12} \text{MKTSIZ} \\ & \quad (?) \quad (+) \quad (-) \quad (+) \\ & + \beta_{13} \text{UNRATE} + \beta_{14} \text{INDDIV} \\ & \quad (-) \quad (-)\end{aligned}$$

(4.2b) Different employer 1966 and 1971

$$\begin{aligned}\Delta\text{OCC} = & \beta_0 + \beta_1 \text{OCC66} + \beta_2 \text{EDUC} + \beta_3 \text{TRN66} + \beta_4 \text{TRN71} \\ & \quad (-) \quad (+) \quad (+) \quad (+) \\ & + \beta_5 \text{TRNBTH} + \beta_6 \text{HEALTH} + \beta_7 \text{TENURE} + \beta_8 \text{MSP71} \\ & \quad (+) \quad (+) \quad (+) \quad (+) \\ & + \beta_9 \text{AGE} + \beta_{10} \text{RACE} + \beta_{11} \text{MKTSIZ} + \beta_{12} \text{UNRATE} \\ & \quad (-) \quad (-) \quad (+) \quad (-) \\ & + \beta_{13} \text{INDDIV.} \\ & \quad (-)\end{aligned}$$

Regression results To begin our discussion of the regression results for Equations (4.2a) and (4.2b) it is worthy of note that the explanatory power of the equations adjusted for degrees of freedom, ranges from 24 to 42 percent (Table 4.5).⁴⁵ All in all, the model does a substantially better job of explaining the distance moved by the occupationally mobile than of explaining the probability of movement either upward or downward.

There is strong evidence in these data of racial discrimination in promotion/demotion practices in internal labor markets. Overall, there

⁴⁵One way of assessing the extent to which the "model" rather than "regression-toward-the-mean" is explaining the distance of occupational change is to compare the maximum explanatory power of the base-year occupation (i.e., the square of the zero-order correlation between OCC66 and ΔOCC) with the explanatory power of the entire equation (unadjusted for degrees of freedom). For example, among white men who did not change employers these two figures are .128 and .281, indicating that more than half of the explanatory power of the equation is attributable to the human capital variables and other personal characteristics. For the other equations this proportion ranges from one-third to one-half.

Table 4.5 Regressions Relating the Distance of Occupational Mobility 1966-1971 to Selected Explanatory Variables, by Comparison of Employer 1966-1971 and Race^a
(t-ratios)
(Coefficients shown in percentage points)

Explanatory variable ^b	Same employer		Different employer	
	Whites	Blacks	Voluntary	Involuntary
OCC66	- 0.5 (-9.12)***	- 0.9 (-7.52)***	- 0.6 (-6.52)***	- 0.8 (-6.08)***
EDUC	2.4 (5.90)***	1.3 (2.51)***	1.5 (2.18)**	0.3 (0.31)
TRN66	- 1.4 (-0.53)	8.0 (1.92)**	0.9 (0.22)	15.1 (3.09)***
TRN71	2.9 (0.61)	8.7 (0.95)	12.5 (1.94)**	- 3.3 (-0.45)
TRNBTH	3.3 (0.96)	12.2 (1.93)**	9.3 (1.50)*	- 4.2 (-0.48)
HEALTH	- 1.6 (-0.54)	11.0 (2.26)**	4.7 (1.15)	8.1 (1.07)
TENURE	0.3 (2.30)**	0.4 (2.01)**	1.1 (0.92)	1.4 (1.52)*
MSP71	5.7 (1.06)	- 2.2 (-0.56)	7.8 (1.54)*	4.9 (0.71)
PVT66 ^c	3.8 (1.27)	- 4.0 (-1.04)	d	d
ALTJOB	3.9 (1.20)	- 3.5 (-0.79)	d	d
AGE	- 0.1 (-0.29)	0.2 (0.42)	0.2 (0.54)	0.4 (0.64)
RACE	d	d	0.0 (0.00)	- 6.5 (-0.80)
MKTSIZ	0.01 (1.26)	0.00 (0.65)	0.03 (2.08)**	- 0.02 (-0.99)
UNRATE	- 0.0 (-0.02)	0.0 (0.66)	0.0 (0.80)	- 0.0 (-0.97)
INDDIV	0.3 (1.51)	- 0.1 (-0.36)	0.1 (0.28)	- 0.2 (-0.53)
Constant	-14.6 (-0.85)	-14.6 (-0.60)	-29.8 (-1.17)	- 5.3 (-0.17)
-2 R	.244	.383	.314	.418
F-ratio	7.61	6.32	5.53	5.52
Number of respondents	288	121	115	83

a Respondents 50 to 64 years old in 1971 who (1) were not retired in 1966 or 1971, (2) were nonmigrants between 1966 and 1971, (3) were employed wage and salary workers in 1966 and 1971 and (4) changed occupations between 1966 and 1971.

b For a detailed description of the explanatory variables see text, pp. 129-131.

c Because there is no directional hypothesis for the variable, two-tailed tests of statistical significance are applied.

d Variable does not appear in this equation.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

is only a small intercolor difference (in favor of whites) in the average vertical distance moved by the occupationally mobile--i.e., 0.2 points (Table 4A-4). However, this superficial similarity masks several important black/white differences which serve to keep middle-aged black men from ascending the occupational ladder as fast or as high as their white counterparts. First, the larger negative coefficient of OCC66 for blacks means that at each rung on the ladder it is more difficult for blacks than for whites to rise further. Second, each year of formal schooling advances a white man further than a black (see the coefficients of EDUC), even though post-school training seems to be more important for the latter.⁴⁶ Another way of stating this is that despite the facts that black men began the five-year period at much lower levels of occupational status and that starting position bears a strong negative relationship to the absolute size of gains, occupationally mobile black men gained noticeably less in status than the corresponding group of white men.

One method of quantifying the magnitude of this type of racial discrimination in internal labor markets is to estimate how far an average middle-aged black man would have progressed had he had the advancement opportunities of whites. We do this by inserting the mean values of the explanatory variables for blacks into the white regression equation and "predicting" a value of ΔOCC . This procedure yields an estimate of 7.2 points of growth in status for blacks, as compared to their actual average growth of 3.9 points. Thus, if middle-aged blacks had had the same access to occupational advancement within the firm they would have moved nearly twice as far up the status hierarchy.⁴⁷

Moving on to the other results pertinent to intra-firm occupational change, it is noteworthy that, other than race, only the variables

⁴⁶This greater return to training (in terms of status growth) may simply reflect racial selectivity in the access to training opportunities. For evidence in this sample of the occupationally mobile, see Table 4A-4. See also Chapter Two in this volume.

⁴⁷An alternative method of "standardizing" the racial differences is to estimate the distance an average middle-aged white man would have moved if he had had to operate with the constrained opportunities of blacks--i.e., by inserting the white means into the black regression. This method yields equally striking results. That is, if the average white man had faced the same barriers as his black counterpart, the former would have moved down rather than up the occupational ladder! The estimated value of ΔOCC is -10.9, due mainly to the much higher mean value of OCC66 for whites and the much larger negative coefficient of OCC66 for blacks.

measuring human capital resources are significantly related to the vertical distance of movement. While several of the other variables have the predicted signs, in no case is the coefficient statistically significant at conventional levels. When the nonsignificant coefficients for AGE in these distance equations are considered along with the results of the probability-of-change equations, they suggest that promotion and demotion practices in internal labor markets are not characterized by age discrimination, at least within the age group under consideration. This does not, of course, demonstrate the complete absence of age discrimination. First, our restricted age group precludes what may be the most pertinent kinds of comparison--e.g., between 35-year-old and 50-year-old men. Second, since the analysis is confined to employed full-time workers it is possible that it has eliminated victims of age discrimination who have been forced into partial or total withdrawal from the labor force.

Turning now to the middle-aged men who changed both occupation and employer(s) between 1966 and 1971, it is important to note that, on average, they lost status as a result of their mobility.⁴⁸ Moreover, while the statistical tests indicate that different variables affect the distance of occupational movement for voluntary as compared to involuntary firm-changers, the net loss in status is virtually the same for both groups. For voluntary inter-firm movers formal schooling, recent vocational training (TRN71 and TRNBTH), and being married make positive contributions to status gains when a change of occupational assignment occurs. In contrast, among men who were discharged or laid off by their 1966 employer only previous vocational training (TRN66) and length of service with the new employer make significant contributions to status improvement.

Irrespective of the reason for changing employers, neither the age nor the race of a middle-aged occupation-changer exhibits a significant impact on the distance of the occupational move. As far as age is concerned, this finding is perfectly consistent with our previous results. The absence of a significant net racial difference among men who change employers implies, in conjunction with our findings relating to intra-firm occupational movers, that the external labor market offers greater opportunities for advancement to blacks than the internal labor market.

⁴⁸As compared with men who remained with the same employer, inter-firm movers were more likely to experience both upward and downward occupational changes. The overall loss of status by inter-firm occupation changers means that (a) downward changes outnumbered upward changes, (b) downward changers experienced larger status changes, or (c) both.

Returns to Occupational Mobility

Because change in prestige is only one of the potential outcomes of occupational change, we now turn to an investigation of economic and psychological "payoffs" to mobility. In order to ascertain whether there are such payoffs it is necessary to have a reference group with which to compare the experiences of the occupationally mobile. Hence, the statistical analysis is applied to the entire sample of middle-aged men--i.e., the group for whom we investigated the probabilities of occupational change. Three criterion measures are used to capture the "payoff" to mobility--(1) the relative growth in average hourly earnings between 1966 and 1971, (2) the likelihood of increased job satisfaction between 1966 and 1971, and (3) the likelihood of decreased job satisfaction between 1966 and 1971.⁴⁹ Because all of the criterion measures are hypothesized to depend on a set of personal and environmental characteristics which are also determinants of occupational mobility, it is necessary to hold constant these characteristics in order to ascertain the net effects of mobility. We accomplish this by multiple regression analysis of equations whose general form is as follows:

$$(4.3) \Delta WAGE = F(MOBUP, MOBDWN, WAGE66; Z)$$

$$(4.4) MORSAT = G(MOBUP, MOBDWN, SAT66; Z)$$

$$(4.5) LESSAT = H(MOBUP, MOBDWN, SAT66; Z) \text{ where}$$

$\Delta WAGE$ = percentage change in average hourly earnings

$MORSAT$ = likelihood of increased job satisfaction

$LESSAT$ = likelihood of decreased job satisfaction

$WAGE66$ = average hourly earnings on 1966 job

$SAT66$ = level of satisfaction with 1966 job

$MOBUP$ = likelihood of upward occupational mobility

$MOBDWN$ = likelihood of downward occupational mobility

Z = a vector of variables hypothesized to affect both change in hourly earnings (job satisfaction) and occupational mobility.

⁴⁹More precise definitions of these variables are as follows: (1) the ratio of hourly earnings on the 1971 job to hourly earnings on the 1966 job minus one; (2) a binary variable which assumes the value "1," if the score of reported job satisfaction is lower in 1971 than in 1966 (where satisfaction is scored from 1 = like very much, to 4 = dislike very much); (3) a binary variable which assumes the value "1" if the score of reported satisfaction is higher in 1971 than in 1966.

Since our sole interest is in the coefficients of MOBUP and MOBDWN, it is unnecessary to elaborate hypotheses underlying the other variables in Equations (4.3)-(4.5).⁵⁰ On the assumption that the various perquisites of a job are complementary, we would expect the coefficient of MOBUP to be positive in Equations (4.3) and (4.4). That is, middle-aged men who progressed up the occupational ladder would be expected to experience greater improvement in earnings and satisfaction than those who were occupationally immobile. In Equation (4.5) the upwardly mobile should exhibit a lower likelihood of decreased job satisfaction. Analogous reasoning would lead us to anticipate negative coefficients for MOBDWN in Equations (4.3) and (4.4) and a positive coefficient in Equation (4.5). On the other hand, the literature on the economics of wage determination often suggests that wage differentials can persist because they compensate for differentials in other characteristics of jobs. Following this line of reasoning would lead us to anticipate the signs of the coefficients to be exactly opposite of those enumerated above, at least in Equation (4.3). Thus, in addition to identifying the payoffs to occupational mobility the regression results will aid in choosing between the competing hypotheses.

To facilitate a compact presentation of the results, Table 4.6 displays mean values of each of the three criterion measures for the upward movers, the occupationally immobile, and the downward movers, controlling for comparison of employer.⁵¹ The difference between the means within a comparison-of-employer group are net of the other determinants of the dependent variable because the means are calculated from the results of the regression equations (Tables 4A-5 and 4A-6).⁵²

⁵⁰It should, perhaps, be pointed out that WAGE66 and SAT66 are included to control for the regression-toward-the-mean phenomenon, exactly as was done with OCC66 in Equations (4.2a) and (4.2b).

⁵¹The results of Chow tests for interactions among race, reason for inter-firm movement, and the other regressors in the models lead us to present only the results which pool the racial groups and the voluntary and involuntary job changers. However, all equations include a binary variable representing race and the equations for job changers contain the binary variable VOLUNT. In most of the Chow tests performed the calculated F ratio was less than 1.00, and the critical value of F (at $\alpha < .05$) was at least 1.72 in each test.

⁵²That is, the means are computed by assigning each variable in the equation, except MOBUP and MOBDWN, its average value and then summing the products of these averages and the respective regression coefficient. When the constant term is added to this sum, one has the mean of the criterion for the occupationally immobile. Addition of the coefficient for MOBUP (MOBDWN) yields the mean of the criterion for the upwardly (downwardly) mobile.

Table 4.6 Net^a Change in Average Hourly Earnings and Job Satisfaction by Comparison of Employer and Occupational Mobility 1966-1971^b

Comparison of employer and occupation 1966-1971	Number of respondents	Mean relative increase in hourly earnings 1966-1971 (percent)	Percent more satisfied with job	Percent less satisfied with job
Same employer				
Mobile upward	229	47.5*	14.7	23.2*
Immobile ^c	1,051	42.3	12.9	28.9
Mobile downward	164	43.5	8.4*	39.0**
Different employer				
Mobile upward	90	51.4*	22.7	31.9
Immobile ^c	122	40.2	23.0	26.3
Mobile downward	96	37.5	21.2	31.8

- a The changes are "net" in the sense that they are derived from regression equations (Tables 4A-5 and 4A-6) using change in hourly earnings (or change in satisfaction) as the dependent variable and the following as regressors: MOBUP, MOBDWN, CCC66, EDUC, TRN66, TRN71, TRNBTH, TENURE, HEALTH, AGE, RACE, MSP71, MKTSIZ, UNRATE, INDDIV and, where applicable, PVT66, VOLUNT, WAGE66 and SAT66. The latter two variables are included in the equations to control for the regression-toward-the-mean phenomenon. The first, WAGE66, is the average hourly earnings on the 1966 job, measured in dollars. The second, SAT66, is the reported level of satisfaction with the 1966 job, where 1 = like it very much and 4 = dislike it very much. Thus, the difference in, say, average relative wage increase between the upwardly mobile and the immobile is calculated holding all other variables (in the equation) constant at their means.
- b Respondents 50-64 years old in 1971 who (1) were not retired in 1966 or 1971, (2) were nonmigrants between 1966 and 1971, and (3) were employed wage and salary workers in 1966 and 1971.
- c Includes a few respondents who changed 3-digit occupations without an accompanying change in occupational status--i.e., the laterally mobile.
- ** Significantly different from the immobile at $\alpha \leq .01$.
- * Significantly different from the immobile at $.01 < \alpha \leq .05$.

The pattern of the statistical results makes it quite clear that there are net positive payoffs to (upward) occupational mobility (Table 4.6). Irrespective of whether a middle-aged man changed employers, if he moved up the occupational ladder he enjoyed a significantly larger relative improvement in hourly earnings than did the occupationally immobile or the downwardly mobile. Among men who changed firms, the upwardly mobile experienced an average 51.4 percent increase in hourly earnings over the five-year period, as compared to average increases of 40.2 and 37.5 percent for the occupationally immobile and the downward movers, respectively. On the other hand, the downward movers were not significantly disadvantaged in earnings growth vis-a-vis the occupationally immobile. Indeed, among men who were with the same employer in 1966 and 1971, the pattern suggests that the status loss suffered by downward movers may have been compensated by a slight gain in relative earnings. Finally, it is apparent that greater economic returns to upward occupational mobility accrue to those middle-aged men who are also mobile between employers--the average percentage increase in earnings was 51.4 as compared to 47.5 percent for those who were promoted within their firms. In contrast, men who did not change occupations and those who moved down occupationally fared better monetarily if they stayed with the same employer.

When occupational mobility is related to changes in job satisfaction the evidence is strong and systematic for men who remained with same employer. Upward movers were more likely than the immobile who, in turn, were more likely than downward movers to exhibit increased satisfaction. Likewise, the upwardly mobile were only four-fifths as likely as the immobile and three-fifths as likely as the downwardly mobile to register a decrease in the level of job satisfaction. Among interfirm movers, however, there is no clear pattern of association between changes in job satisfaction and changes in occupational assignment. Nevertheless, it is notable that in each occupational-mobility category, men who changed employers were more likely than those who did not to report greater satisfaction in 1971. Finally, the data on satisfaction provide some additional evidence in support of the hypothesis that some job characteristics are substitutes for one another. Among the employer-changers those who moved up the occupational ladder register both the largest average percentage increase in hourly earnings and the largest likelihood of a decrease in job satisfaction.

IV SUMMARY AND CONCLUSIONS

This study has focused on the changes of occupation that occurred among a cohort of middle-aged men over the five-year period between 1966 and 1971. Drawing upon literature from economics and sociology we have presented and tested hypotheses relating to four dimensions of occupational mobility--i.e., the likelihood of an upward occupational move, the likelihood of a downward move, the distance moved by the occupationally mobile, and the payoff to mobility in terms of earnings and job satisfaction.

An empirical overview of the actual mobility of the cohort during the five years yielded the following conclusions. First, the net movement of wage and salary workers among the nine major occupation groups, although barely perceptible, nonetheless suggests a continuation of the forces that had produced the lifetime occupational change of the cohort to 1966. Second, despite the limited net change in occupational distribution, about one-fourth of the men had changed major occupation groups between 1966 and 1971. Of course, gross mobility rates varied substantially according to the occupation of the 1966 job, with professionals and technicians among the least mobile and clerical/sales workers among the most mobile. Finally, a comparison of the NLS data with retrospective longitudinal data from the 1970 Census reveals a reasonable congruence between the two sources in both the estimated magnitude and the patterns of occupational mobility among middle-aged men.

In analyzing the determinants of occupational mobility, we have hypothesized that the direction and distance of occupational movement are dependent on the base-year level of occupational attainment, the human capital resources of an individual, (e.g., education, training, health), a set of personal characteristics (e.g., age, race, attitudes), and a set of job-related and environmental variables (e.g., whether changed employers, whether employed in the private sector, state of the local labor market). In studying the economic and psychological returns to mobility we have controlled for most of those factors and have investigated differentials between occupation changers and nonchangers in the relative improvement of hourly earnings and job satisfaction over the five-year period. Throughout the study the empirical generalizations were derived from the results of multiple regression analysis.

The following generalizations summarize the highlights of the empirical findings. First, inter-firm mobility is the single, most consistent correlate of occupational change during middle age. The word "correlate" is used, rather than "determinant," because there is doubtless a strong simultaneity in these two types of mobility. Specifically, middle-aged men who change firms are about twice as likely as those who do not to change occupations, but intra-firm shifts are more likely than inter-firm shifts to involve movement up the occupational status hierarchy. Second, holding base-year occupation constant, the probability of upward movement and the distance of movement are positively related to the years of schooling completed by the worker. There is also some evidence that other types of human capital resources (e.g., formal occupational training) make a contribution under certain circumstances.

Third, when a middle-aged man registered some dissatisfaction with his base-year occupation he was more likely than the occupationally contented man to change occupations during the ensuing five years. Indeed, such dissatisfaction was found not only to induce upward mobility

but also to lead to changing lines of work even at the expense of a decline in occupational status. Fourth, no systematic net relationship exists between age and the several dimensions of occupational mobility. Thus our data offer no evidence of age discrimination in promotion, demotion, or hiring practices, at least within the relatively narrow age limits of our sample.

Fifth, race is importantly related to occupational mobility in certain contexts. While there is no perceptible intercolor difference in the probabilities of upward or downward occupational change, the analysis of the distance of movement provides strong support for an hypothesis of racial discrimination in internal labor markets. Despite the facts that black men began the five-year period at much lower levels of occupational status and that starting position bears a strong negative relationship to the absolute size of gains, occupationally mobile white men progressed noticeably further than their black counterparts. For example, we have estimated that if middle-aged black men had had access to the same advancement opportunities as whites, the blacks would have moved nearly twice as far up the occupational hierarchy as they actually did.

Finally, the results indicate that there are indeed economic and psychological payoffs to occupational change, even among middle-aged men. The psychological returns (in terms of increased job satisfaction) are evident and strong only among men who remained with the same firm over the five-year period. But the economic returns (in terms of relative improvement in hourly earnings) prevail both among those who changed employers and among those who did not. Moreover, the data provide support for the thesis that some mobile middle-aged workers trade off gains in some job characteristics (e.g., earnings) for losses in others (e.g., satisfaction).

In summary, we are drawn to conclude that by the midpoint of their working lifetimes most workers have reached an occupational level from which they are not likely to advance, especially if they change employers. Yet this is quite different from some gloomy assessments of the plight of the middle-aged worker which are predicated on a virtually complete halt to occupational advancement by age 45.⁵³ Our longitudinal data, in contrast to the synthetic cohort data previously used to draw inferences about occupational mobility in middle age, indicate that a substantial minority of working men in their late 40's and 50's do change occupational assignments and, on balance, profit economically and psychologically from having done so. Nevertheless, this optimism must be tempered by our findings on racial discrimination in internal labor markets and by the observation that 30 to 40 percent of the middle-aged men who moved down occupationally registered decreases in job satisfaction.

⁵³See Jaffe (1971), pp. 42-43.

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CHAPTER V

EARLY RETIREMENT

Herbert S. Parnes and Gilbert Nestel*

I INTRODUCTION

Retirement is one of the several major landmarks in a man's life. Along with completion of formal education and marriage, it usually constitutes a rather sharp demarcation between one style of life and another. For the vast majority of men it has substantial economic implications; for all, it has psychological and social effects.

The conventional retirement age has long been 65, but this seems to be already in the process of changing. As evidenced by a variety of indicators, the phenomenon of early retirement has become increasingly prevalent in recent years. Over the quarter century between 1947 and 1972 the labor force participation rate of men between the ages of 55 and 64 declined from 89.6 to 80.5 percent.¹ Social Security Administration data show that in recent years over half of the men initially entitled to retirement benefits have drawn reduced benefits at ages 62 through 64.² Finally it should be noted that by the late 1960's the vast majority of private pension plans in the United States had provisions for the payment of retirement benefits prior to age 65, typically at actuarially reduced rates.³

* We wish to express our appreciation to Randall H. King and Shu-O Yang for their conscientious research assistance.

¹U.S. Department of Labor (1973), Tables A-2 and A-3. (Complete citations for this and all subsequent references are presented at the end of the chapter.) The figures cited for blacks are for "Negroes and other races."

²U.S. Department of Health, Education, and Welfare (1971), p. 16, Table 1. This figure admittedly must be interpreted with care, since several technical aspects of the administration of the OASDHI program affect age at entitlement. See Lenore Bixby (1970).

³Davis and Strasser (1970), pp. 52-53; Davis (1971), p. 48.

Understanding the factors that affect the decision to retire early and the circumstances that accompany such retirement is important from several points of view. First, if the determinants of early retirement can be specified, they provide a partial basis for forecasting labor force size as well as for assessing the actuarial requirements of public and private pension plans. Secondly, the factors accounting for retirement and the circumstances of retired individuals have implications for the welfare of the retiree. To the extent that early retirement occurs voluntarily while the individual enjoys good health, it presumably represents a free choice that is at least intended to enhance happiness. However, when it results from loss of job and inability to find another or from the individual's physical inability to keep pace with the requirements of his job the implications are quite different. Finally, since reduction in the size of the labor force by virtue of early retirement is a matter affecting the welfare of the total society,⁴ it is important to understand the factors that can encourage or discourage the practice.

None of the men in our sample had reached age 65 by the time of the 1971 interview. Nevertheless, about 14 percent of the total--577 in all--regarded themselves to be retired as of that date. Some of these, indeed, had reported themselves as retired in the initial survey in 1966; but over 400 had retired at some time between the 1966 and 1971 interviews. Our purpose in this chapter is to ascertain the factors that are associated with these withdrawals as well as with the expectation of early retirement on the part of men who remained employed as of the 1971 survey. In addition, we shall examine the characteristics, the economic circumstances, and the future work plans of the total group of men who reported themselves to be retired as of 1971.

In the following section we present a conceptual framework for the analysis of factors associated with early retirement. Section III relates to the expectation of early retirement by men who were employed in 1971 as well as to the actual retirements that occurred over the five years covered by the study. In the fourth section we examine the characteristics of early retirees as of 1971. The final section summarizes the findings and discusses their implications.

II CONCEPTUAL FRAMEWORK AND METHOD OF ANALYSIS

The Meaning of Retirement

"Retirement" is not a completely unambiguous term. Generally speaking, it refers to a transition from a role of full-time, full-year worker in which the principal means of support is earned income to a situation involving substantially greater amounts of leisure in which

⁴Kreps (1966).

sources other than current earnings are relied upon for support to some substantial degree. But this generic description covers many variants. At one extreme, there is the situation in which an individual withdraws completely and permanently from the labor force. At the other, there is the individual who leaves one job after sufficient service to entitle him to a pension and who almost immediately begins a second full-time work career. Retired military personnel and selected categories of local government workers have hitherto constituted the most conspicuous examples. Between these extremes there is virtually a complete continuum.

In the light of the foregoing we have devised two quite different operational definitions of retirement for our empirical work. For the first, we accept as the criterion of retirement the declaration by a respondent that he was "already retired" in response to the question "At what age do you expect to retire from your regular job?" Retirees by this criterion are the group whose characteristics and circumstances are examined in Section IV. Moreover, individuals who were not retired by this criterion in 1966 but who had become so by 1971 are one of the groups whose retirement over the five-year period is analyzed in the following section. It should be noted that conceptually this criterion of retirement does not require the individual to have ended, or indeed even to have curtailed, his labor force participation.

The second criterion of retirement is a substantial curtailment in the extent of labor force participation over the five-year period. More specifically, retirement in this context is a situation in which an individual who was in the labor force for at least 3,000 hours during the two-year period 1965-1966⁵ reduced his participation to fewer than 1,000 hours in the two-year period between the 1969 and 1971 interviews.

The Retirement Decision

Not only is there ambiguity in the meaning of the term "retirement," but there are also ambiguities in the reasons people customarily give for deciding to retire. For example, when a man reports that he has retired because of poor health, this may mean that he has suffered a massive stroke which completely immobilizes him and precludes further work. On the other hand, it may also mean that as the result of one or more physical ailments the individual is no longer willing to endure the physical and psychological hardships which would be entailed by continuing to hold a regular job. In the latter case, is the reason for retirement the individual's poor health, or is it that the presence of an early retirement provision in his employer's pension plan enables him to cease work while continuing to enjoy at least a modicum of financial security and independence? The point is that another man with identical physical ailments but without rights to early retirement benefits might

⁵Strictly speaking, the time period is calendar year 1965 plus the 12-month period prior to the date of the 1967 interview.

very well have decided against retirement. To take another example, with a given level of financial resources, being disgusted with one's job may induce an individual to retire if he has no dependents, but not if he still has two children in high school. Under these circumstances, if a man does retire is it because he is unhappy with his job or is it because his children no longer depend upon him for financial support?

The foregoing considerations indicate why a study of the determinants of early retirement can better be done on the basis of objective measurements of circumstances and attitudes than on the basis of the reasons for retirement cited by the individuals involved. Moreover, they make it clear that the decision to retire is generally a resultant of a variety of circumstances and considerations. We turn now to the description of a conceptual model that attempts to identify and to classify these factors.

Conceptual Framework

One important cause of retirement is a policy on the part of employing establishments making retirement mandatory at a specified age. Some of the most serious issues surrounding retirement involve such practices, since they may force out of gainful employment individuals who both want to continue and by all reasonable standards are able to do so. However important, it should be noted that this question is not involved in the present analysis, since none of the men in our sample had attained age 65 by the time of the 1971 survey and since very few employing establishments have a mandatory retirement age lower than 65.⁶

Aside from compulsory retirement there are five sets of factors which are hypothesized to influence the age at which a man retires from his regular job and thus the probability that an individual will retire prior to age 65: (1) financial need; (2) financial resources in the absence of work; (3) ability to work; (4) economic and noneconomic rewards in continuing to work; and (5) relative preferences for leisure and income (work). Each of these, of course, has numerous dimensions, and the measures that are available to us are by no means complete. In the following paragraphs we set forth the variables that will be used in the analysis and discuss their hypothesized relationships with either the expectation or the actual occurrence of early retirement.

⁶In 1966 about 45 percent of middle-aged wage and salary workers were covered by compulsory retirement plans, of whom only 3 percent of the whites and 6 percent of the blacks reported a compulsory retirement age of 64 or lower. (Parnes et al., 1970, pp. 175-6) Of the individuals included among the retirees analyzed in this chapter, only two were employed in 1966 under a program that would have required their retirement by 1971. It is nevertheless recognized that early retirement provisions may sometimes be used to pressure an employee into retiring (Davis, 1973).

Financial need Financial need is obviously to some extent a subjective factor. Two men in precisely the same objective circumstances may have different "needs" for income depending upon the level and pattern of consumption they hope to achieve. Nevertheless, such objective characteristics of an individual as his marital status and the number of dependents he has may be expected to be related to the extent of his need for income. Other things equal,⁷ we expect early retirement to be less common among married men living with their wives than among others. Similarly, we hypothesize an inverse relationship between number of dependents (other than wife) and the probability of early retirement. These are the only two relevant variables for which we have measures that can be used in the analysis of actual retirement. However, in the analysis of the expected age of retirement reported in 1971 by men who were employed at that time, we have two additional pieces of information: the age at which the respondent predicts he will have no dependents other than his wife, and his view on the desirability of leaving an inheritance to his children. We hypothesize that men who expect to be free of dependents prior to age 65 will be more likely than others to plan to retire early. The desire to leave a bequest to children is expected to be associated with a lower-than-average probability of an intention to retire early.

Financial resources in the absence of work The likelihood of retirement should vary directly with an individual's potential income if he does not work. Ideally, for testing this hypothesis one would like a complete measure of all sources of income during the retirement period, but the measures available to us fall considerably short of this. One variable used in this context is net family assets. We anticipate a positive relationship between this variable and the incidence of early retirement or the expectation thereof.

Another source of post retirement income, which for most men is more significant than their net assets, consists of retirement benefits under the Social Security System and retirement pension plans. We have no direct measure of expected levels of Social Security benefits, but we do know whether respondents were covered by a private pension plan. Additionally, in the 1971 survey respondents were asked the amount of the monthly benefit payment they would receive under employer or union pension plans assuming that they retired at the normal retirement age and, alternatively, at an earlier age. In analyzing the expected retirement age of men employed in 1971 we use this variable, and hypothesize that the expectation of early retirement will be directly related to the level of benefits the individual can expect under those circumstances.

For the analysis of actual retirements between 1966 and 1971 we use a combination of coverage by a private pension plan and length of service in 1966 job, since eligibility for either normal or early retirement

⁷The ceteris paribus assumption is to be understood to be incorporated in all of the hypotheses set forth hereafter.

benefits as well as the level of benefits are ordinarily dependent upon length of coverage by the plan.⁸ We expect that the probability of retirement over the five years covered by the study will be related to length of service in their 1966 jobs for individuals who were covered by pension plans at that time. The relationship is not expected to be monotonic, however, since service of 10 or 15 years is typically one of the eligibility requirements for early retirement.⁹

Ability to work Whether a man continues to work is obviously influenced by the state of his health and his physical condition. We hypothesize that men who report health limitations that affect the kind or amount of work they can do are more likely to retire early or to expect to do so than are men who are free of such limitations. Another variable that we expect to be related to the probability of early retirement and that with some stretching can be classified in this category is whether the individual's job was as a wage and salary earner or as a self-employed individual. Since self-employed individuals are more likely to be able to adjust their hours of work downward as they grow older, we expect smaller proportions of them than of wage and salary earners to retire early or to expect to do so.

Economic and noneconomic rewards from working One would suppose that if it were possible completely to control for all other factors, the likelihood of retirement would be inversely related to the financial and psychic rewards of working.¹⁰ So far as financial rewards are concerned,

⁸ By the late 1960's the vast majority of private pension plans had provisions for the payment of retirement benefits prior to age 65, typically at actuarially reduced rates. Retirement with actuarially reduced benefits as early as age 62 became possible for men under the Social Security Act in 1961. See Davis and Strasser (1970), pp. 52-53; Davis, (1971), p. 48.

⁹ Davis and Strasser (1970), p. 52.

¹⁰ The conventional economic theory of labor supply teaches that the relationship between wage rate and the amount of labor offered is a matter which must be resolved empirically rather than theoretically. A wage increase is conceived to have both an income effect and a substitution effect upon the amount of labor offered. The income effect relates to the disposition of an individual to "purchase" more leisure (and all other "normal goods") out of the higher income generated by the increased wage rate. The substitution effect, on the other hand, results from the fact that the price of leisure increases as the result of the wage increase, disposing the individual to wish to "purchase" less of it (i.e., to substitute other goods for leisure, and therefore to work more). There is no theoretical way of predicting what the net effect of these two counteracting forces will be.

Lowell Gallaway has pointed out that the gross relationship between earnings and the retirement decision is theoretically ambiguous, since high earning capacity is related to high savings and liberal pension benefits which operate to increase the desire to retire; but is also related to the desired level of post-retirement consumption, which may be expected to operate in the opposite direction. Thus, the "ultimate effect of present high earning capacity on the decision to retire is . . . a matter of . . . empirical determination."¹¹ Gallaway's work with social security data led him to conclude that the "ultimate" (gross) effect of earnings on the probability of early retirement is negative. "In effect, high wages discourage withdrawal from employment among the aged, with part of the effect being offset by the presence of additional sources of nonwork related income."¹²

The important question, however, is what the net relationship is between wage rate and probability of early retirement. As has been mentioned above, with adequate controls for all other variables, we would expect a negative relationship. However, the problem is that we are not able to control for all of the other relevant variables. For example, current wage rate is highly correlated with an individual's desired level of post retirement consumption. This should strengthen the negative net relationship that we should expect to observe between wage rate and the likelihood of early retirement, since we have no variable in the model representing that factor. On the other hand, wage rate is also positively related to the level of social security income that an individual can expect to receive, and this would tend to operate in the opposite direction.

To put all of this another way, the respondent's wage rate in our model is representing not only the economic reward for working, whose influence on retirement and retirement expectations is hypothesized to be negative, but is also representing several other influences whose effects upon retirement run in opposite directions. It is therefore not possible to predict the direction of the relationship that will be yielded.

There is no such ambiguity, however, with respect to our measure of psychic reward. Other things equal, we believe that a man is less likely to be willing to give up working if he likes what he is doing than if he

However valid and relevant this point may be with respect to studying variations in hours of labor supplied, we are inclined to agree with Bowen and Finegan that where the dependent variable involves an "all-or-nothing" decision like labor force participation (or retirement), the substitution effect may be presumed to prevail, i.e., the relationship between wage rate and disposition to work will be positive. See Bowen and Finegan (1969), p. 53n.

¹¹Gallaway (1965), pp. 13-14.

¹²Gallaway (1965), p. 17.

is relatively dissatisfied with it. We hypothesize, in other words, that the probability of retirement or of the expectation of early retirement will be inversely related to the degree of satisfaction the respondent has expressed in his job. For the analysis of retirement expectation, we introduce an additional measure. In the 1971 survey, respondents were asked a series of questions relating to their evaluations of their work experience over the preceding five-year period, the responses to which have been combined into an index. It is hypothesized that the more favorable the respondent's evaluation of his experience, the less likely he will be to contemplate early retirement.

Attitude toward work and retirement In addition to the psychic rewards attaching to a particular job, an individual's retirement decision is likely also to be affected by how strongly he is committed to the work ethic and by the extent to which he views retirement as a reasonably happy state. Our measure of work commitment is an index based upon responses to two questions in the 1966 survey. One of these asked whether the individual would continue to work if he somehow obtained enough money to live comfortably without working. The other inquired what he would do if he were permanently laid off from his present job. Responses to these two questions were combined to produce an index ranging from high to low commitment to work; we hypothesize an inverse relationship between this measure and the probability of early retirement or the expectation thereof.

In the 1971 survey a series of questions were asked relating to the respondent's perception of retirement. Responses to these were likewise combined into an index, ranging from strongly positive to strongly negative attitudes. This variable, relevant only to the analysis of 1971 retirement expectations, is expected to bear a positive relationship with the expectation of early retirement.

Race and age Two additional explanatory variables that are included in the analysis but that have not been alluded to in the description of the model in the preceding paragraphs are race and age. Our purpose in introducing race is to ascertain whether there appear to be any differences in the likelihood of retirement between whites and blacks when other factors correlated both with color and with the likelihood of retirement are controlled.¹³

Age is introduced into the analysis of retirement expectations because we believe that the age at which a man expects to retire is

¹³We began our analysis of the influence of race by stratifying the sample and running separate MCAs for blacks and whites in order to ascertain whether race interacted with the other explanatory variables--i.e., whether the slopes of the explanatory variables differed as between the two groups. Finding that they did not, we have simply introduced race as a variable in analyzing the pooled data.

influenced to some degree by his proximity to it.¹⁴ In the analysis of actual retirement we introduce age as a variable because both for economic and psychological reasons we expect it to exercise a pronounced independent influence on the likelihood of retirement. As an illustration, any given level of assets constitutes a relatively smaller financial resource base for retirement at an early than at a later age. Moreover, other things being equal, the post-retirement level of consumption that an individual hopes to achieve is likely to be greater if retirement were to occur at age 45 than if it were to occur at age 60. As a final illustration, a given level of dissatisfaction with one's current job is less likely to result in retirement at age 45 than at age 55 because retirement at the latter age is considerably more "respectable" in terms of social norms than at the former.

Time Frame for Explanatory Variables

While the majority of the explanatory variables used to analyze expected age of retirement of men employed in 1971 are identical to those used in the analysis of actual retirements, the time at which they were measured differs. For the analysis of actual retirements over the five-year period 1966-1971, the explanatory variables were measured as of the 1966 survey. For the analysis of retirement expectations in 1971, on the other hand, the variables were measured as of 1971. The only exception to this generalization occurs in the case of the commitment-to-work index; in this case, the 1966 measure is used in both 1966 and 1971.¹⁵

Method of Analysis

The correlates of the expectation and actual occurrence of early retirement are explored by means of multiple classification analysis (MCA) in the next section.¹⁶ This technique allows one to calculate for each category of a particular variable what the proportion of early retirees would have been had the members of the category been "average"

¹⁴Streib and Schneider (1971), p. 45.

¹⁵The reason for the exception is that not all of the questions which comprise the index were asked in 1971.

¹⁶Multiple classification analysis is identical to the more typical multiple regression analysis with all of the explanatory variables expressed in categorical rather than continuous form, which avoids the assumption of linearity. The constant term in the multiple classification equation represents the grand mean of the dependent variable over all of the observations. The coefficient of each category of every explanatory variable represents a deviation from the grand mean.

in terms of all other variables entering into the analysis. Differences in these "adjusted" proportions among the various categories of a given variable may be interpreted as indicating the "pure" effect of that variable upon the likelihood of early retirement, controlling for the other variables in the analysis.

III THE LIKELIHOOD OF EARLY RETIREMENT

As has been explained, we examine the factors associated with early retirement in two quite different ways: first by analyzing the expectations reported by men who were employed at the time of the 1971 survey and second by focusing on the actual retirements that occurred over the five years covered by the study.

Retirement Expectations, 1971

Of the total group of men who were between 50 and 60 years of age¹⁷ and employed at the time of the 1971 survey, 38.5 percent indicated the intention of retiring prior to age 65 (Table 5.1).¹⁸ It is important to note that this percentage is substantially larger than that which prevailed when the sample was originally interviewed in 1966. At that time, the corresponding proportion (among the identical group of men) was 28 percent. In view of the fact that in the cross section there is a negative relation between age and the expectation of early retirement, the proportion should have declined as the sample aged if other things had remained the same. The fact that it increased suggests that other things have indeed not remained unchanged. The increasing prevalence of early retirement provisions of pension plans and the liberalization of both social security and private pension benefits are among the factors that help to explain the upward trend in plans for early retirement over the five-year period.¹⁹

¹⁷We confine the analysis to those 50 to 60 years of age because without such a limitation the results would be biased by the fact that substantial numbers of individuals in the 61 to 64 year age group would have actually retired early and would not be represented in the sample.

¹⁸In calculating the proportion of men expecting to retire early, we have excluded from the base those for whom no information on this variable was obtained and those who responded "don't know" to the question.

¹⁹Barfield and Morgan (1969, pp. 9-10) cite evidence from surveys taken in 1963, 1966, and 1968 that points to an increasing desire to retire early, but admit that the data may have been influenced by the wording of questions. A Canadian longitudinal study of a sample of men in their mid-forties found that the number of subjects with positive attitudes toward retirement increased as they aged from 48 to 54 years old. Also,

Race and age In gross terms, a larger percentage of white than of black men report an expectation of early retirement, although the difference shrinks when other factors are controlled and is not statistically significant (Table 5.1). It is noteworthy that the fairly substantial difference that exists between the actual labor force participation rates of white and black men in their late fifties and early sixties is not presaged by their retirement expectations.

Men between the ages of 57 and 60 are less likely than the younger members of the sample to expect to retire prior to age 65. In this case the difference persists even when other factors are controlled, and is statistically significant. Apparently as a man approaches the conventional retirement age either the attractiveness of retirement declines or its economic feasibility becomes more problematic.

Financial need Generally speaking, the expectation of early retirement varies in the hypothesized directions with our measures of financial need, and all but one of the variables achieve statistical significance (Table 5.1). Men who were married and living with their wives displayed a somewhat lower probability of expecting to retire early than nonmarried men. Men with no dependents (other than their wives) are more likely to be planning early retirement than those who have dependents, although the number of dependents is not systematically related to retirement expectations. Also, the age at which a man expects to be free of dependents appears to be a factor in his retirement plans. Those who expect to have dependents beyond age 65 are significantly less likely than others to plan an early retirement. On the other hand, the desire to leave an inheritance to his children apparently does not exercise a perceptible influence on the retirement expectations of a middle-aged man.

Financial resources The relationship between net assets and the expectation of early retirement is reasonably regular in the expected direction except for the large proportion of men with no assets at all who plan to retire early (Table 5.2).²⁰ If one excludes that class, the

over the six-year period the proportion of respondents specifying a "suitable" retirement age under 65 rose from 51.8 percent to 69.3 percent (Crawford and Matlow, 1972, pp. 624-627).

²⁰ The anomaly is particularly perplexing in view of the fact that in a comparable analysis of the expected age of retirement reported by members of the sample in 1966, those with zero or negative assets had a substantially below-average probability of reporting an intention to retire early. We have gone to substantial lengths to satisfy ourselves that this change in relationship actually occurred, rather than resulting from a data processing error. We are not able to provide a completely satisfactory explanation, except to report that those men with no assets who advanced their expected retirement age between the 1966 and 1971 surveys explained the change predominantly in terms of changed attitudes toward their job.

Table 5.1 Unadjusted and Adjusted^a Proportions of Men 50 to 60 Years of Age Expecting to Retire Prior to Age 65, by Race, Age, and Selected Indicators of Financial Need, 1971

Indicator	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
Total sample	2,547	38.5	38.5	17.33**
$\bar{R}^2$	0.228			
Race				0.88
Whites	1,869	39.1	38.8	
Blacks	678	32.3	35.9	
Age				3.03**
50-52	798	40.7	39.6	
53-56	948	39.9	40.3	
57-60	801	34.7	35.5	
Marital status				4.57*
Married, wife present	2,217	38.7	37.6	
Wife absent, widowed, divorced, separated	254	38.6	46.2	
Never married	76	33.7	45.2	
Number of dependents (excluding wife) ^b				3.33**
None	1,294	40.1	40.8	
1	529	37.1	34.8	
2-3	524	37.2	37.5	
4 or more	192	34.0	34.6	
Age when respondent will have no dependents				4.01**
None now	1,197	40.1	38.2	
Prior to age 65	701	42.1	41.6	
65 or later	337	27.4	31.7	
NA or "don't know"	312	33.4	39.2	
Desire to leave inheritance				1.35
Yes	1,714	38.4	38.6	
No	605	41.8	39.9	
NA or "don't know"	228	30.5	34.3	

* Significant at $\alpha \leq .05$.

** Significant at $\alpha \leq .01$.

a Adjusted for the effects of age, race, marital status, number of dependents, age at which respondent will be free of dependents, whether respondent wishes to leave bequest, net assets, expected retirement income, health, class of worker, average hourly earnings, attitude toward job, evaluation of 5-year work record, commitment toward work, and attitude toward retirement. For method of adjustment, see text.

b The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.

Table 5.2 Unadjusted and Adjusted^a Proportions of Men 50 to 60 Years of Age Expecting to Retire Prior to Age 65, by Net Assets and Expected Monthly Pension Income

Net assets and expected monthly pension income	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
Total sample	2,547	38.5	38.5	17.33**
$\bar{R}^2$	0.228			
Net assets				3.49**
None or negative	176	39.2	45.9	
\$1-4,999	300	26.9	31.9	
\$5,000-9,999	236	36.6	37.1	
\$10,000-24,999	508	40.1	34.7	
\$25,000 or more	683	44.1	41.7	
NA	644	35.0	39.1	
Expected monthly pension income ^b				43.71**
None	758	28.4	29.5	
\$1-299	266	51.6	47.4	
\$300-599	210	74.2	65.1	
\$600 or more	87	77.6	68.7	
Don't know amount ^c	125	67.1	64.1	
Amount NA ^d	357	36.8	36.0	
Eligibility NA	744	23.5	28.8	

** Significant at $\alpha \leq .01$.

a See Table 5.1, note a.

b Respondent's estimate of retirement income from company or union pension plan if he retires prior to age 65.

c Respondent is eligible for early retirement benefits, but does not know amount.

d Respondent is eligible for early retirement benefits, but amount was not ascertained.

adjusted percentage of men expecting to retire early increases fairly regularly from 32 percent of those with net assets under \$5,000 to 42 percent of those with \$25,000 or more.

The amount of the monthly pension an individual would be entitled to receive if he retired prior to age 65 has a much stronger and more regular influence on plans for early retirement than does net assets. On the basis of the adjusted percentages, there is a monotonic increase in the proportion planning early retirement from 30 percent of those who would be entitled to no benefits to 69 percent of those whose monthly benefits would be \$600 or more.

Ability to work As hypothesized, other things being equal, a man whose health does not affect his work in any way is less likely to expect to retire prior to age 65 than a man with health problems (Table 5.3). The difference in the adjusted proportions is about 4 percentage points, which is statistically significant at the .05 level. Although the class-of-worker variable falls short of statistical significance, it is worth mentioning that the adjusted proportion of men expecting to retire early is 4 percentage points smaller for self employed individuals than for private wage and salary workers. It should be noted in this context that the difference in unadjusted proportions is much greater--18 percentage points.

Financial and psychic rewards The simple (gross) relationship between the average hourly earnings of middle-aged men employed as wage and salary workers²¹ and the likelihood of their expecting to retire early is positive and fairly regular (Table 5.4). The expectation of early retirement is roughly twice as prevalent among those earning \$5.00 or more as among those who earned under \$1.50. If one accepts the line of reasoning outlined above in the discussion of our conceptual framework, this suggests that the positive association between wage rate and financial resources is dominating the gross relationship between wage rate and retirement expectation.

In the adjusted percentages, the positive relationship disappears and there is little in the way of a discernible pattern. The introduction of the financial resource and the job satisfaction variables is doubtless largely responsible for the difference between the adjusted and unadjusted percentages. As has been observed, because we have no direct measure of desired level of post-retirement consumption and also because our measures of financial resources are incomplete, it is not possible from these results to confirm or refute our hypothesis that the pure "reward" effect of wage rate on the disposition to retire is negative.

²¹The average hourly earnings variable is not available for the self-employed.

Table 5.3 Unadjusted and Adjusted^a Proportions of Men 50 to 60 Years of Age Expecting to Retire Prior to Age 65, by Health Condition and Class of Worker of Current or Last Job

Health condition and class of worker	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
<u>Total sample</u>	2,547	38.5	38.5	17.33**
$\bar{R}^2$	0.228			
<u>Health condition</u>				3.84*
Health affects work	476	42.7	41.9	
Health does not affect work	2,071	37.5	37.7	
<u>Class of worker^b</u>				1.07
Private wage and salary	1,701	40.6	39.5	
Government wage and salary	469	45.8	38.0	
Self employed	376	22.8	35.5	

* Significant at $\alpha \leq .05$.

** Significant at $\alpha \leq .01$.

a See Table 5.1, note a.

b See Table 5.1, note b.

Table 5.4

Unadjusted and Adjusted^a Proportions of Men 50 to 60 Years
of Age Expecting to Retire Prior to Age 65, by Average
Hourly Earnings and Degree of Job Satisfaction, 1971

Average hourly earnings and job satisfaction	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
<u>Total sample</u>	2,547	38.5	38.5	17.33**
$\bar{R}^2$	0.228			
<u>Average hourly earnings</u>				1.41
Less than \$1.50	52	25.7	33.5	
\$1.50-2.49	296	32.5	42.5	
\$2.50-3.49	418	31.1	34.3	
\$3.50-4.99	722	45.7	39.9	
\$5.00 or more	569	48.8	39.1	
NA	490	24.4	37.7	
<u>Job satisfaction</u>				14.7**
Liked job very much	1,157	32.9	32.7	
Liked job somewhat	1,138	42.9	43.2	
Dislikes job	194	50.3	46.6	
NA	58	19.6	38.2	
<u>Evaluation of 5-year work record</u>				3.07*
Positive	880	33.3	36.1	
Ambivalent	1,557	41.6	39.8	
Negative	45	49.3	49.8	
NA	65	20.6	30.7	

* Significant at $\alpha \leq .05$.

** Significant at $\alpha \leq .01$.

^a See Table 5.1, note a.

On the other hand, the evidence with respect to psychic rewards, as measured by the degree of satisfaction expressed by the respondents in their 1971 jobs, strongly supports our hypothesis. The adjusted data show a 14 percentage point spread between those who reported liking their job very much and those who reported disliking it. A comparable difference exists between men who made favorable assessments of their work experience during the previous five years and those whose evaluations were negative.

Attitudes toward work and leisure It is clear from Table 5.5 that attitudes toward work and retirement are strongly associated with a man's retirement expectations. Men who look forward to retirement, whose wives encourage them to do so, and who have friends who are happy in retirement are far more likely to expect to retire early than those with contrary views and experiences. The index we have constructed on the basis of these factors is divided into three categories ranging from "positive" to "negative." In the former, over seven-tenths of the respondents contemplate early retirement in contrast to only about a third in the latter. The index of work commitment is also strongly associated with the likelihood that a man expects to retire early. Among those with high commitment, 36 percent plan to retire early as compared with 47 percent of those with low commitment.

Actual Retirements, 1966-1971

We turn our attention now from retirement expectations to actual retirements--specifically those that occurred between the time of the initial survey in mid-1966 and the interview that was conducted in late summer and autumn of 1971. It will be recalled that we have two different measures of "retirement." The first of these is whether the individual, in response to a query in 1967, 1969, or 1971 about the age at which he expected to retire from his regular job, declared himself already to be retired. The second criterion of retirement is a reduction in hours in the labor force from at least 3,000 in the two-year period 1965 to 1966 to something under 1,000 between 1969 and 1971. It is clear that by each of these criteria the act of retirement is an all-or-nothing proposition: an individual either meets the criterion and is retired or does not and is not considered to be retired.

It is of some interest at the outset to examine the extent of retirement by each of these criteria. Overall, 9.4 percent of the men who were employed in the survey week of 1966 had indicated by 1971 that they had retired from their regular job. The proportion of men reducing their hours of work to less than 1,000 was somewhat lower, 5.0 percent. The principal explanation for the difference between these two percentages lies in the fact that many of the men who, by the first criterion, had retired between 1969 and 1971 had nevertheless worked more than 1,000 hours during that period prior to their retirement.²²

²²Over half of the men who had retired between the 1969 and 1971 interviews had last worked subsequent to June, 1970.

Table 5.5 Unadjusted and Adjusted^a Proportions of Men 50 to 60 Years of Age Expecting to Retire Prior to Age 65, by Attitude to Work and Retirement

Attitude	Number of respondents ^b	Unadjusted percent	Adjusted percent ^a	F-ratio
<u>Total sample</u>	2,547	38.5	38.5	17.33**
$\bar{R}^2$	0.228			
<u>Index of work commitment, 1966</u>				8.96**
High	1,437	36.6	35.5	
Medium	166	43.7	43.1	
Low	458	57.4	47.2	
NA	486	26.9	38.5	
<u>Index of attitude toward retirement</u>				63.81**
Positive	156	87.6	72.8	
Ambivalent	315	60.4	55.7	
Negative	427	33.0	33.4	
NA	1,649	30.7	33.0	

** Significant at $\alpha \leq .01$.

a See Table 5.1, note a.

Age and race As expected, by both criteria the likelihood of retirement is very substantially related to age. On the basis of the adjusted data, only 4 percent of the men in their early 50's had retired as compared with 6 percent of those in their late 50's and 22 percent of those in their early 60's. A roughly comparable pattern exists in the proportions of men reducing their work hours (Table 5.6).

The relationship between early retirement rates and color is an interesting one. Using declared retirement as the criterion, black men had an unadjusted withdrawal rate that was 2.5 percentage points higher than whites. When the adjusted proportions are consulted, however, the difference shrinks to 0.4 percentage point, which is clearly not statistically significant. In other words, whatever gross difference exists between whites and blacks can be accounted for in terms of the intercolor differences in the other factors that are associated with retirement. In the case of the hours-reduction criterion, the unadjusted figures are about the same for whites and blacks; the adjusted proportion for whites is actually higher than that of blacks, but the difference is not statistically significant.

Financial need As hypothesized, married men living with their wives in 1966 were less likely to have retired by 1971 than widowed, divorced, or separated men (although not than the never-married) (Table 5.6). Number of dependents, on the other hand, is not statistically significant, although the slight differences in the adjusted proportions of early retirees for those without and those with dependents are in the hypothesized direction.

Financial resources The net assets variable yields mixed results (Table 5.7). To begin with, irrespective of the criterion of retirement, those with no net assets show a substantially greater likelihood of retiring than all other men. Aside from this group, the hypothesized relationship between net assets and the probability of retirement prevails in the case of the hours reduction criterion but not by the criterion of reported retirement. In the latter case there is very little relationship, although those in the highest asset category (\$25,000 or more) are slightly more likely to have retired than those in the other categories. By the hours reduction criterion there is a regular relationship between the asset variable and the likelihood of retiring, such that those in the highest category are twice as likely to have retired as those in the lowest category of individuals with some net assets.

The relationship between pension coverage and the likelihood of retirement is as expected. By both criteria the likelihood of retirement increases with length of service for those eligible for private pensions, and this relationship is rather pronounced. On the other hand, those who are ineligible, that is, those not covered by private pension plans at all, were no less likely to retire than covered workers with short

Table 5.6 Unadjusted and Adjusted^a Measures of the Likelihood of Retirement between 1966 and 1971,
by Race, Age, and Selected Indicators of Financial Need, 1966

Indicator	Criterion of "retirement"							
	Reporting "retired from regular job" ^b				Reducing hours from 3,000 or more in 1965-1966 to less than 1,000 in 1969-1971 ^c			
	Number of respondents	Percent retiring Unadjusted	Adjusted	F-ratio	Number of respondents	Percent retiring Unadjusted	Adjusted	F-ratio
Total or average	3,817	9.4	9.4	14.86**	3,528	5.0	5.0	7.49**
<u>R²</u>	0.113				0.060			36.09**
<u>Age, 1971</u>								
50-54	1,451	3.1	3.8	141.66**	1,358	2.0	2.6	
55-59	1,349	6.3	6.1		1,245	4.0	3.9	
60-64	1,017	22.4	21.6		925	10.6	9.9	2.66
<u>Race</u>								
Whites	2,774	9.2	9.4	0.09	2,607	5.1	5.2	
Blacks	1,043	11.7	9.8	3.42*	921	4.5	3.0	3.40*
<u>Marital status^d</u>								
Married, wife present	3,406	8.9	9.1		3,166	4.7	4.8	
Wife absent, widowed, divorced, separated	275	16.5	15.1		244	10.0	9.5	
Never married	130	11.8	8.9		114	5.7	4.1	
<u>Number of dependents (excluding wife)</u>								
None	1,409	13.7	10.4	1.64	1,274	7.3	5.6	0.78
1	888	7.8	8.1		832	3.9	4.0	
2-3	1,012	6.4	9.3		956	3.5	5.0	
4 or more	470	5.0	8.4		436	3.6	5.5	
NA	38	16.8	16.1		30	4.7	5.6	

* Significant at $\alpha \leq .05$.

** Significant at $\alpha \leq .01$.

Continued on next page.

Table 5.6 continued

- a Adjusted for the effects of age, race, marital status, number of dependents, net assets, duration of pension coverage, health, class of worker, average hourly earnings, attitude toward job, and commitment to work.
- b Respondents not "retired from a regular job" in the survey week of 1966 who were employed at that time.
- c Respondents who were in the labor force for at least 3,000 hours in the two-year period 1965-1966 (calendar 1965 and 12 months preceding 1967 survey).
- d The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.

Table 5.7 Unadjusted and Adjusted^a Measures of the Likelihood of Retirement between 1966 and 1971,
by Net Assets and Duration of Pension Coverage in 1966

Net assets and duration of pension coverage	Criterion of "retirement"							
	Reporting "retired from regular job" ^b				Reducing hours from 3,000 or more in 1965-1966 to less than 1,000 in 1969-1971 ^c			
	Number of respondents	Percent retiring Unadjusted	Percent retiring Adjusted ^d	F-ratio	Number of respondents	Percent retiring Unadjusted	Percent retiring Adjusted ^d	F-ratio
<u>Total or average</u>	3,817	9.4	9.4	14.86**	3,528	5.0	5.0	7.49**
<u>R²</u>	0.113				0.060			
<u>Net assets</u>								
None or negative	498	15.0	14.6		426	9.4	8.3	
\$1-4,999	600	7.4	8.0		553	3.3	2.9	
\$5,000-9,999	488	8.6	8.8		455	3.5	3.7	
\$10,000-24,999	777	8.2	8.2		736	4.6	4.8	
\$25,000 or more	712	9.6	9.8		683	5.5	6.0	
NA	742	10.1	9.5		675	5.4	5.1	
<u>Pension coverage and tenure^d</u>								
Not covered by employer plan								
Employer pension, less than 10 years' service	1,873	8.7	8.2	5.80**	1,669	5.1	5.0	4.40**
Employer pension, 10-19 years' service	585	5.2	7.2		558	2.1	2.9	
Employer pension, 20 or more years' service	542	10.1	11.5		524	3.5	4.1	
NA	668	14.6	13.0		539	8.3	7.7	
	149	8.9	7.9		138	6.9	5.0	

* Significant at $\alpha \leq .05$.

** Significant at $\alpha \leq .01$.

a See Table 5.6, note a.

b See Table 5.6, note b.

c See Table 5.6, note c.

d Coverage by employer pension plan.

service. This is not a surprising result, since short service workers covered by pension plans would ordinarily not be entitled to receive benefits.

Ability to work The importance of poor health in inducing early retirement is evident in both sets of the data (Table 5.8). The probability of retirement during the five-year period, whether expressed in terms of declared retirement or in terms of substantial reduction in hours in the labor force, was twice as great for men who had health problems affecting their work in 1966 as for those who were free of such limitations.

By the criterion of declared retirement, the hypothesized relationship between class of worker and likelihood of retirement does not prevail. On the other hand, when drastic reductions in hours are the criterion, self-employed individuals are considerably less likely to have retired than are wage and salary earners.

Work commitment The degree of work commitment evidenced by the respondents in the initial interview bears a very strong relationship to the likelihood of retirement over the five-year period (Table 5.8). By both criteria of retirement, men with low commitment are almost twice as likely to have retired as those with high commitment, and men with intermediate degrees of commitment fall between these two extremes.

Economic and psychological rewards As was true in the case of retirement expectations, there is no statistically significant relationship between average hourly earnings and the likelihood of declared retirement over the five-year period; but when hours reduction is the criterion the association between the two variables is statistically significant, but irregular (Table 5.9).

Using degree of job satisfaction to measure psychic reward, the same strong relationship that prevailed in the case of retirement expectations is discernible when reported retirement is the criterion. However, when hours reduction is used as the test of retirement the relationship, although significant, is contrary to expectation in that those expressing some dissatisfaction with their 1966 jobs were as likely as the highly satisfied men to have retired.

IV THE CHARACTERISTICS AND STATUS OF EARLY RETIREES

Of the more than 4,000 middle-aged men in the sample who were interviewed both in 1966 and 1971, there were 577 whites and blacks who indicated in 1971 that they were retired from a "regular job." Most had retired during the course of the five years covered by the study, but almost 150 of them had reported a retired status as early as the 1966 interview.

Table 5.8 Unadjusted and Adjusted^a Measures of the Likelihood of Retirement between 1966 and 1971,
by Health Condition, Class of Worker and Work Commitment, 1966

Characteristic	Criterion of "retirement"							
	Reporting "retired from regular job" ^b				Reducing hours from 3,000 or more in 1965-1966 to less than 1,000 in 1969-1971 ^c			
	Number of respondents	Percent retiring Unadjusted	Percent retiring Adjusted ^a	F-ratio	Number of respondents	Percent retiring Unadjusted	Percent retiring Adjusted ^a	F-ratio
Total or average	3,817	9.4	9.4	14.86**	3,528	5.0	5.0	7.49**
$\bar{R}^2$	0.113				0.060			
Health condition	818	16.5	15.6	27.07**	698	8.8	8.3	13.12**
Health affects work								
Health does not affect work	2,986	7.5	7.7	0.89	2,812	4.0	4.1	
Class of worker ^d								
Private wage and salary	2,549	9.4	8.9		2,376	5.6	6.0	
Government wage and salary	561	10.8	11.0		538	4.6	6.2	
Self employed	706	8.3	9.8		613	3.4	0.5	
Index of work commitment				13.49**				5.89**
High	2,074	7.1	8.0		1,924	3.8	4.1	
Medium	252	12.5	12.4		228	6.8	6.4	
Low	719	16.8	14.9		675	8.6	8.0	
NA	772	8.0	7.4		701	4.7	4.4	

** Significant at $\alpha \leq .01$.

a See Table 5.6, note a.

b See Table 5.6, note b.

c See Table 5.6, note c.

d See Table 5.6, note d.

Table 5.9 Unadjusted and Adjusted^a Measures of the Likelihood of Retirement between 1966 and 1971, by Average Hourly Earnings and Degree of Job Satisfaction, 1966

Average hourly earnings and degree of job satisfaction	Criterion of "retirement"						
	Reporting "retired from regular job" ^b			Reducing hours from 3,000 or more in 1965-1966 to less than 1,000 in 1969-1971 ^c			F-ratio
	Number of respondents ^b	Percent retiring	Adjusted ^a	Unadjusted	Adjusted	Unadjusted	
Total or average	3,817	9.4	9.4	9.4	5.0	5.0	7.49**
$\bar{R}^2$	0.113						
Average hourly earnings							
Under \$1.50	429	13.3	11.2	7.0	4.9		
\$1.50-2.49	704	9.8	8.9	6.5	5.7		
\$2.50-3.49	963	8.2	8.3	4.5	4.0		
\$3.50-4.99	575	10.2	10.9	4.4	3.6		
\$5.00 or more	300	9.2	9.1	4.6	3.4		
NA	846	8.7	9.4	4.6	7.6		
Job satisfaction							
Liked job very much	2,108	7.9	7.7	3.8	3.8		16.72**
Liked job somewhat	1,401	10.5	11.0	6.2	6.5		
Disliked job	265	14.1	13.2	4.4	3.8		
NA	43	22.5	24.2	22.9	20.7		

** Significant at $\alpha \leq .01$

a See Table 5.6, note a.

b See Table 5.6, note b.

c See Table 5.6, note c.

These respondents represent a minimum of 1.6 million men in the total population--1.4 million whites and .2 million blacks--who were between the ages of 50 and 64 in 1971, and constitute a reasonably representative national sample of early retirees as of that year.²³ Our purpose in this section is to describe the demographic characteristics of these men, to investigate the circumstances under which they left their jobs and the extent of their post-retirement labor market activity, to assess their plans for and attitudes toward future employment, and to describe their post-retirement financial situation.

Occupational and Demographic Characteristics

While all of the major occupation groups are represented among the early retirees, there are relatively more blue collar and fewer white collar workers among them than among middle-aged men who remained at work (Table 5.10). For example, in the case of the white men, 53 percent of

Table 5.10 Type of Occupation and Class of Worker of 1966 Job, by
Race: Early Retirees Compared with Respondents
Employed in 1971

(Percentage distributions)

Type of occupation and class of worker	WHITES		BLACKS	
	Early retirees	Employed respondents	Early retirees	Employed respondents
Number of respondents	367	2,521	210	899
<u>Type of occupation</u>				
Total percent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
White collar	30	39	6	12
Blue collar	53	46	70	63
Service	6	5	12	14
Farm	10	9	12	10
<u>Class of worker</u>				
Total percent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Wage and salary	(83)	(78)	(94)	(89)
Self employed	(17)	(22)	(6)	(11)

²³ As the result of attrition, the number of retirees is certainly understated and their proportion relative to the total population may be as well, since individuals in the initial sample who retired and migrated may be disproportionately represented among those who have disappeared from the sample. To the extent that this has occurred, it is not clear in what respects it introduces biases into the sample whose characteristics are examined here.

the retirees had been blue collar workers and 30 percent white collar workers. Among the men in the total sample who were employed at the time of the 1971 survey, these proportions were 46 and 39 percent, respectively. Over four-fifths (83 percent) of the white retirees and over nine-tenths (94 percent) of the blacks had been wage and salary workers prior to retirement, somewhat higher proportions than prevailed among the total sample of men who were employed in 1971.

Two-fifths of the white retirees and a slightly larger proportion of the blacks are under age 60 (Table 5.11). A large majority of the men

Table 5.11 Number of Dependents of Early Retirees, by Marital Status, Age, and Race, 1971
(Percentage distributions)

Marital status and age	Number of respondents	Total percent	None	One	Two	Three or more
WHITES						
Total ^b or average	367	100	76	14	5	4
50-59	149	100	67	17	8	8
60-64	218	100	83	12	3	2
Married, wife present	296	100	73	16	6	5
50-59	115	100	60	20	10	10
60-64	181	100	80	13	4	2
Wife absent, separated, widowed, divorced	51	100	90	8	0	2
50-59	21	a	a	a	a	a
60-64	30	100	93	7	0	0
BLACKS						
Total ^b or average	210	100	65	16	9	11
50-59	96	100	59	16	6	20
60-64	114	100	70	16	11	3
Married, wife present	139	100	55	19	12	14
50-59	56	100	44	20	8	27
60-64	83	100	63	19	14	4
Wife absent, separated, widowed, divorced	57	100	82	9	3	6
50-59	30	100	77	8	3	12
60-64	27	100	87	10	3	0

a Percentage not shown where base represents fewer than 25 sample cases.

b Totals include 20 white and 14 black "never married" men.

are married and living with their wives--81 percent of the white men and 66 percent of the blacks--although these proportions are about 8 or 10 percentage points lower than those that prevail among all men of the same age category, as would be predicted from the analysis in the preceding section. Most of the married retirees have no dependents other than their wives, although as many as one in four of the white men and almost half of the blacks have at least one. Among the nonmarried it is even less common for a retiree to have dependents; only a tenth of the white men and two-tenths of the blacks who were separated, divorced or widowed had one or more dependents.

Health Condition

In view of the strong relationship that has been found to exist between health condition and the likelihood of early retirement, it is hardly surprising that a large majority of early retirees have health problems that affect the amount or kind of work they can do (Table 5.12).

Tab 5.12 Proportion of Retirees with Health Problems as of 1966 and 1971, by Age and Race

Age	Number of respondents	Percent with health problems affecting work in:	
		1971	1966
Total or average 50-59 60-64	WHITES		
	367	78	54
	149	85	61
	218	72	49
	BLACKS		
	210	88	55
50-59	96	96	63
60-64	114	80	49

The incidence of health problem is higher among black retirees than among whites and among the younger men than among those 60 to 64 years of age. Apparently men in their fifties rarely retire in the absence of a health problem (15 percent of whites and 4 percent of blacks); it is more common for men in their early sixties to do so, but even here the proportion of men without health problems is not large (28 percent of whites and 20 percent of blacks). It is noteworthy that the incidence of reported health problems among the 1971 retirees was high even in 1966, although considerably lower than in 1971. In the earlier year somewhat over half the retirees had health problems, a proportion more than double that which prevailed among the total age cohort in that year.

A large proportion of the men who reported health problems in 1971 have severe functional limitations. Using the classification system developed by Lawrence Haber,²⁴ over a fifth of the white men and over a fourth of the black men with health problems are "functionally dependent," which means that they cannot go outdoors or use public transportation without assistance. An additional one-fourth of each color group are characterized as having a "severe loss," which means that they report difficulty in walking as well as difficulty in reaching or handling. Only a fourth of the whites and a fifth of the blacks with health problems have no functional limitation or only a minor one.

Expected Retirement Age

The substantial increase in the number of men with health problems over the five-year period helps to explain the fairly large proportion who had not foreseen their early retirement when interviewed in 1966. Of the approximately 200 white men who were employed as wage and salary workers in 1966 and who had retired by 1971, only 36 percent had predicted that they would retire prior to age 65. Among black men, the corresponding proportion was 23 percent.²⁵

Reason for Separation from 1966 Job

Are most early retirements voluntary, or are they imposed upon men by loss of job or by poor health? As has been argued earlier, it is difficult to answer this question on the basis of self-reporting because individuals in precisely the same circumstances may perceive and report the causal factors differently. Nevertheless, some light is shed on the question by the data in Table 5.13, which shows the reasons reported by the post-1966 retirees for having left the jobs they held in that year. If those who reported "retirement" (as distinguished, for example, from "health") may be presumed to have perceived their separation as entirely voluntary, then for about half of the white men and a third of the blacks the process was a voluntary one. On the other hand a third of the white men and over half of the blacks were forced out by poor health, while over a tenth of each experienced a layoff or discharge. In the case of the white men, these forced separations were less common among those who had anticipated early retirement at the time of the 1966 survey.

Post-Retirement Labor Market Activity

For the vast majority of the early retirees, retirement appears to have constituted a relatively permanent and complete cessation of work. For example, of those members of the group who reported themselves retired

²⁴Haber (1966).

²⁵This is not to say that all of these men had correctly predicted the precise age at which they would retire; rather, all of them mentioned an age under 65.

Table 5.13 Reason for Leaving Job Held in 1966, by Expected Retirement Age (ERA) Reported in 1966 and Race^a

(Percentage distributions)

Reason for leaving 1966 job	WHITES			BLACKS		
	Total or average	ERA less than 65	ERA 65 or over	Total or average	ERA less than 65	ERA 65 or over
Number of respondents	203	74	129	115	26	89
Total percent	100	100	100	100	100	100
Involuntary	15	13	17	12	17	10
Health	34	26	39	53	46	55
Retirement	40	56	29	26	27	26
Other voluntary reason	10	5	14	9	10	8

a Respondents employed as wage and salary workers in 1966.

Table 5.14 Labor Force and Employment Status of Retirees, by Health Condition and Race, 1971

(Percentage distributions)

Health condition in 1971	Number of respondents	Total percent	In labor force			Not in labor force
			Total	Employed	Unemployed	
Total or average Health affects work Health does not affect work	WHITES					
	367	100	5	4	1	95
	287	100	5	4	1	95
	80	100	5	5	0	95
	BLACKS					
	210	100	7	5	2	93
	180	100	7	6	1	94
	30	100	9	3	6	91

for the first time in 1969, fewer than one in ten reported any weeks of unemployment between the 1969 and 1971 surveys. The same impression is created by data on the labor force and employment status of the retirees in the survey week of 1971 (Table 5.14). Overall, only 5 percent of the whites and 7 percent of the blacks were either working or seeking work at that time. Especially interesting is the fact that this labor force participation rate does not vary at all according to the health status of the white men and only moderately among the blacks.

Finally, on the basis of their reported plans and their responses to an hypothetical job offer, it is abundantly clear that the retirees not currently in the labor force are not likely to be any more active in the labor market in the future than they have been in the past. Fewer than one in twenty of the white men and only 6 percent of the blacks reported in the 1971 interview that they definitely intended to seek work during the following twelve months. Another handful of each color group said that they might; but almost nine-tenths of each responded with an unqualified "no" (Table 5.15). What is most significant is that this pattern of response was very little different irrespective of whether the men suffered from health problems.

Table 5.15 Work-Seeking Intentions^a of Retirees Not in Labor Force, by Health Condition and Race, 1971
(Percentage distributions)

Health condition in 1971	Number of respondents	Total percent	Yes definitely	Probably; it depends	No
WHITES					
Total or average	349	100	3	10	87
Health affects work	273	100	3	10	87
Health does not affect work	76	100	3	10	87
BLACKS					
Total or average	199	100	6	7	87
Health affects work	172	100	3	9	88
Health does not affect work	27	100	14	0	86

a "Do you intend to look for work of any kind in the next 12 months?"

Where confronted with an hypothetical job offer, retirees who were not currently in the labor market showed no great interest (Table 5.16). In this case, however, there is a discernible difference between those with and those without health problems. Overall, only 1 percent of the whites and 3 percent of the blacks reported that they would definitely take a job if offered one by an employer in the area, and another 15 or 16 percent

Table 5.16 Response to Hypothetical Job Offer,^a by Health Condition and Race^b

(Percentage distributions)

Response to hypothetical job offer	WHITES			BLACKS		
	Total or average	Health affects work	Health does not affect work	Total or average	Health affects work	Health does not affect work
Number of respondents	349	273	76	199	172	27
Total percent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
No; health	44	67	1	57	70	12
No; retired	36	20	63	21	12	55
No; other	4	2	6	4	1	16
Yes; definitely	1	1	3	3	0	12
It depends	16	9	26	15	18	4

a "If you were offered a job by some employer in this area, do you think you would take it?"

b Respondents not in labor force.

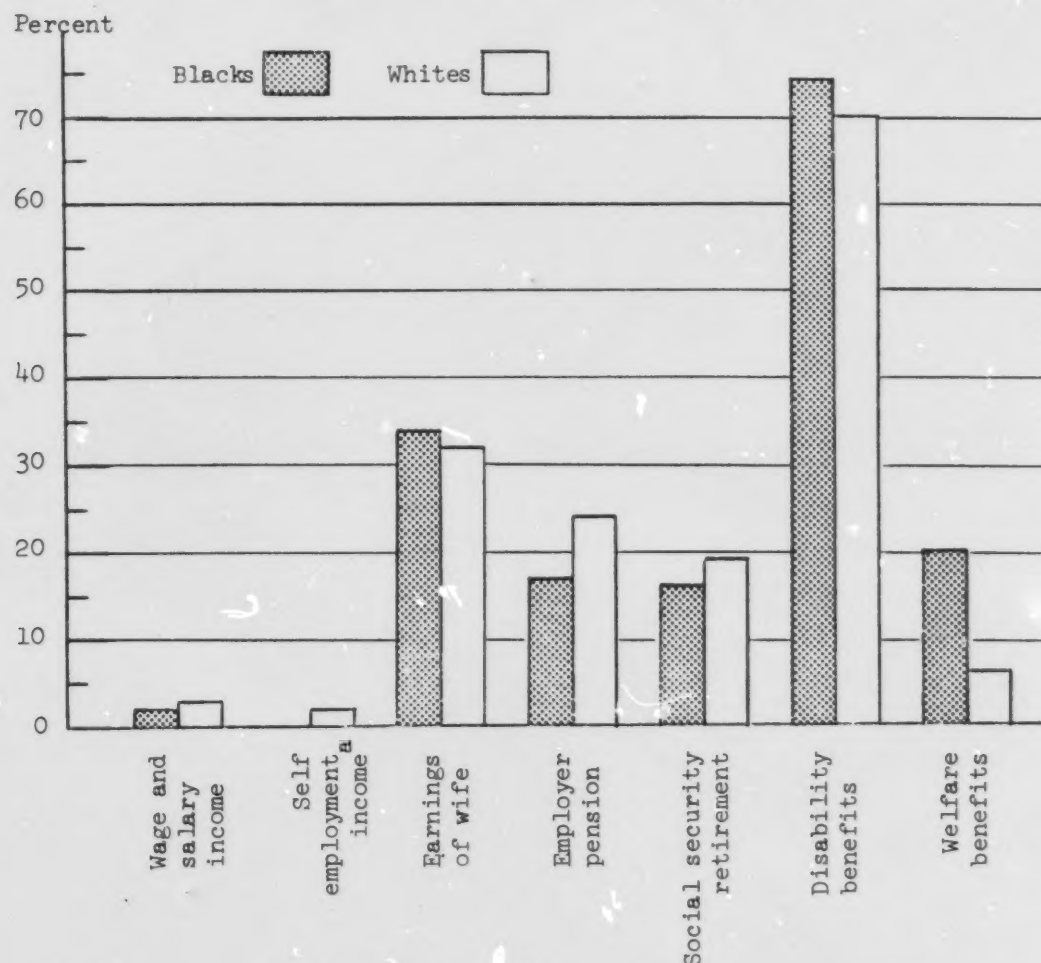
said that they might, depending on the circumstances. In the case of the white men, those with no health problems were three times as likely as their less healthy counterparts to respond both in the unqualified and the conditional affirmative.

Post-Retirement Income

In examining the sources and level of post-retirement income, it is necessary to restrict the analysis to those men who had already indicated a retired status at the time of the 1969 survey, since the latest income data available are for calendar year 1970. This reduces the sample size to only 190 white men and 103 blacks. While these numbers are perilously small, they probably can be relied upon to indicate at least rough orders of magnitude. Among the married men, approximately one-third of both blacks and whites had wives with earnings (Chart 5.1). Aside from this source, the only type of income received by as many as a fourth of all the retirees is disability benefits of various kinds²⁶ and, in the case of blacks, welfare (Chart 5.2). Indeed, almost two-thirds of the white men and over three-fourths of the blacks received disability income payments. In contrast, wage and salary income was received by less than 5 percent of both blacks and whites while social security retirement

²⁶The question specifically referred to "income as a result of disability or illness, such as (1) veteran's compensation or pension, (2) workmen's compensation, (3) aid to the permanently and totally disabled or aid to the blind, (4) Social Security disability payment, and (5) any other disability payment."

Chart 5.1 Percent of Married Retirees Receiving Income from Selected Sources, 1970



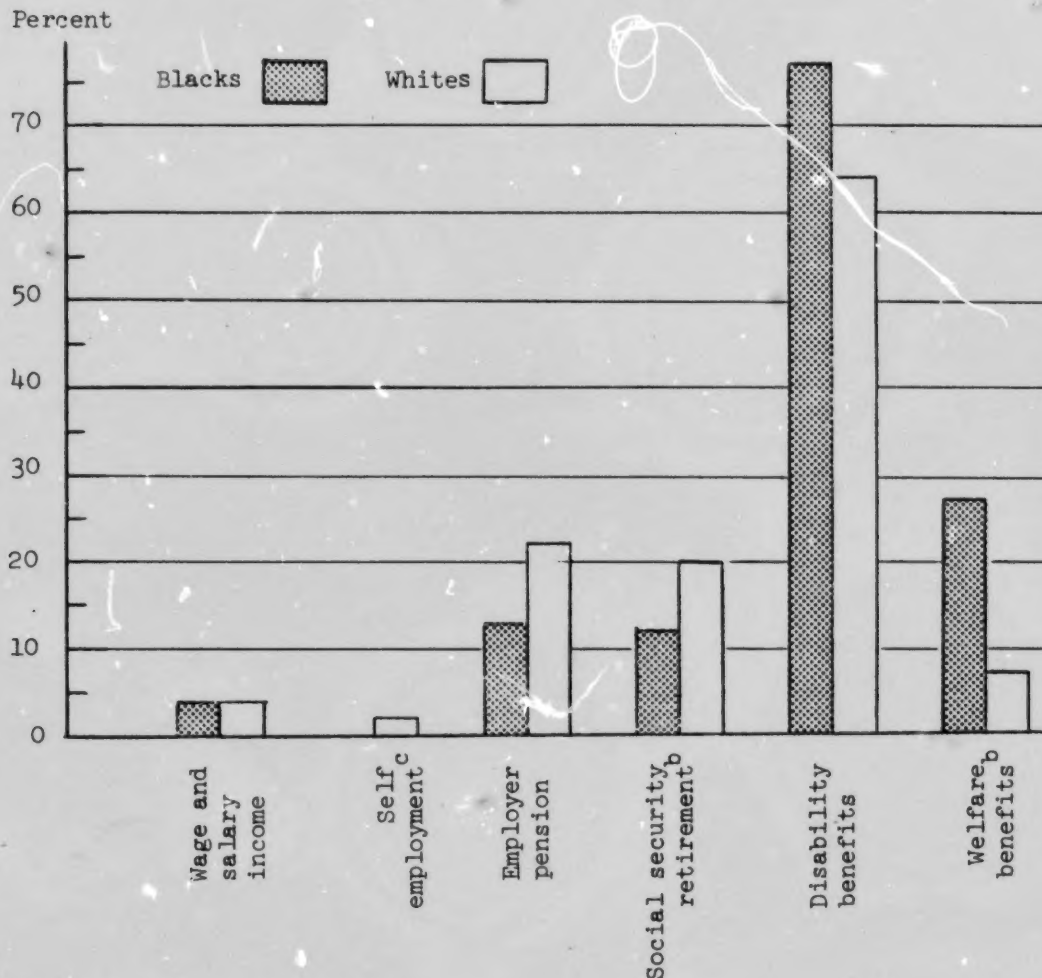
^a Percentage of black respondents is 0.0

Source: Appendix Tables 5A-1 and 5A-2.

benefits and employer pension benefits were received by about a fifth of the whites and a tenth of the blacks. A fourth of the black men and less than a tenth of the whites received welfare payments.²⁷

²⁷Other than those deriving from the categorical programs related to disability.

Chart 5.2 Percent of All Retirees Receiving Income from Selected Sources, 1970^a



a Respondents already retired at time of 1969 survey.

b Includes payments to wife and other family members.

c Percentage of black respondents is 0.0.

Source: Appendix Tables 5A-1 and 5A-2.

There are some age differences in sources of income that are worthy of mention (Tables 5A-1 and 5A-2). Reflecting the greater incidence of health problems among the early retirees still in their fifties is the fact that disability benefits are more common in this age group than among men in their early sixties. Social Security retirement benefits,

of course, are more common in the older than the younger group. Since the earliest retirement age under the Social Security Act is 62, none of the respondents in the younger age category should actually have received benefits. The small number of sample cases reporting them may conceivably reflect the payment of benefits to the wife of a respondent who qualifies for benefits in her own right or may be cases in which OASDHI disability benefits were incorrectly reported as retirement benefits.

The distribution of the retirees by total family income in 1970 is compared with the corresponding distribution of the total sample of middle-aged men in Appendix Table 5A-3, and the respective medians are shown in Chart 5.3. Almost a third of the white retirees and over two-fifths of the blacks had annual incomes under \$3,000, in contrast with only 7 percent of all white respondents and 17 percent of all blacks. At the other extreme, only 13 percent of the white retirees had incomes of \$10,000 or more, in contrast with 58 percent of all white respondents. The corresponding proportions of blacks were 10 and 24 percent. Median family income of white retirees was \$4,254, or 38 percent of the median for all white respondents. For black retirees the median income was \$3,167, or 46 percent of the median for all black respondents. Thus, the black-white income ratio was substantially higher among the retirees than among all middle-aged men (.74 versus .61).

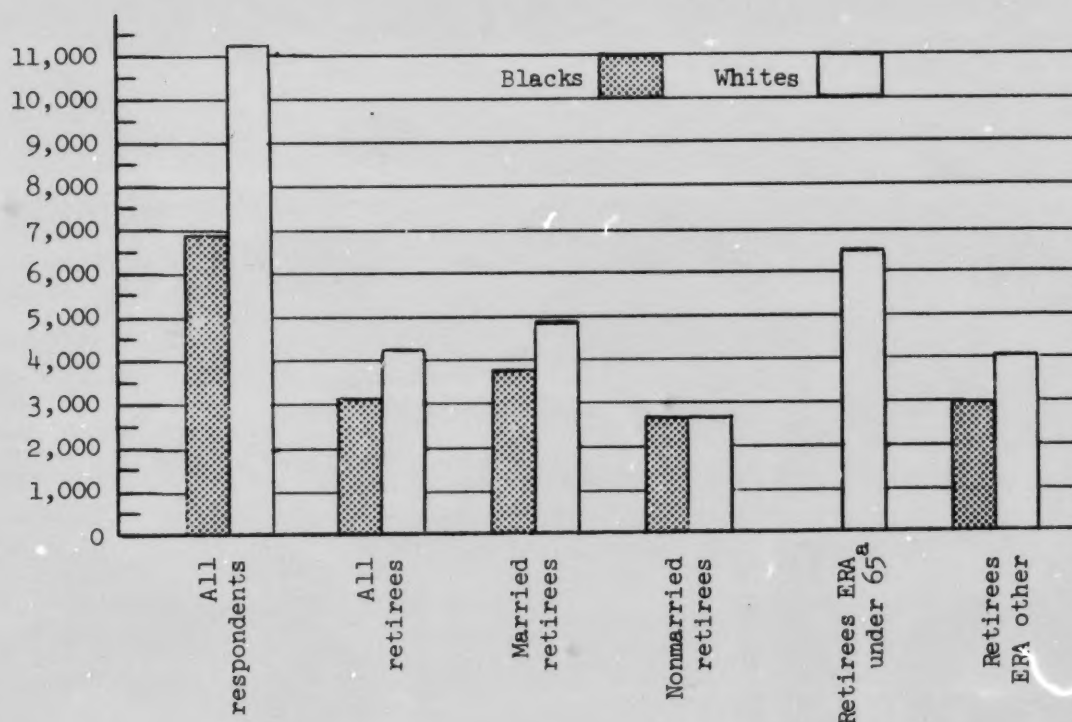
Among the group who retired since the 1966 interview, those who had in 1966 anticipated retirement prior to age 65 were, on average, considerably better off in 1970 than those who had not. In the case of whites, for example, the former (ERA under 65) had a median income 59 percent higher than the latter.

The income of married retirees living with their wives is considerably higher than that of nonmarried men, particularly in the case of whites. Among whites the married-nonmarried ratio of median income is 1.82; among blacks it is 1.41. Although not shown, married retirees with one or more dependents (other than wife) have higher incomes than married men without additional dependents. This is true for both color groups.

A much more meaningful way of assessing the economic implications of retirement is to examine the pre-retirement and post-retirement incomes of the retirees. Unfortunately, this requires restricting the sample size even further, for it is necessary to eliminate those who were already retired in 1966, at the time the first income data were collected. Accordingly, Table 5.17 shows the income distribution of men who were not retired at the time of the 1966 survey but who reported themselves as retired three years later. It must be cautioned that the number of sample cases meeting these criteria are only 110 whites and 48 blacks.

Nevertheless, despite these limitations, the data point to several rather unambiguous conclusions. To begin with, although the Consumer Price Index rose by 23 percent between 1965 and 1970, the median money income of the white retirees fell by 36 percent while that of the black

Chart 5.3 Median Family Income in 1970 for All Respondents and for Selected Categories of Retirees



a Median for blacks not shown because number of sample cases is fewer than 25.

Source: Appendix Table 5A-3.

retirees rose by 11 percent. Thus, in real terms the decline in median family income was almost one-half for the white men (48 percent) and exactly one-tenth for blacks. This was over a period during which the total sample of middle-aged men experienced a gain in real family income of about 10 percent.

Secondly, it is clear that the men who retired between 1966 and 1969 were by no means representative of all middle-aged men in terms of their pre-retirement income; the early retirees tended to be disproportionately concentrated in the lower income categories. The median 1965 income of the white men who subsequently retired was only about eight-tenths as

Table 5.17 Total Family Income, 1965 and 1970, by Race^a

(Percentage distributions)

Total family income	WHITES		BLACKS	
	1965	1970	1965	1970
Number of respondents ^b	110	110	48	48
Total percent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Under \$3,000	14	27	36	42
\$3,000-3,999	7	15	16	15
4,000-4,999	7	12	15	8
5,000-5,999	11	5	9	8
6,000-6,999	10	9	16	8
7,000-7,999	7	9	0	2
8,000-9,999	18	8	0	2
10,000-14,999	16	7	7	8
15,000 and over	10	8	0	8
Median	\$6,956	\$4,444	\$3,100	\$3,427

a Respondents already retired in 1969 but not retired in 1966.

b Totals include 12 white men and 9 black men for whom family income was not ascertained for 1965 and 24 whites and 10 blacks for whom data are not available for 1970.

great as for all the middle-aged white respondents in that year. Among blacks, the ratio was 65 percent. These findings are consistent, of course, with the greater incidence of health problems among the early retirees even prior to their retirement and with the fact that they were more likely than the total group to be blue collar than white collar workers.

On average, the asset position of the retirees had not been adversely affected by retirement, at least as of 1971, although inflation had taken its toll (Table 5.18). For white men, median net assets rose by 14 percent in money terms between 1966 and 1971. The black retirees were considerably worse off than the whites, with approximately half having no net assets in either year. While not worse off than before retirement in terms of net assets, the retirees compared unfavorably with the total group of middle-aged men in this respect. For example, a third of the white retirees had assets under \$5,000 in 1971 in contrast with under a fifth of all white members of the sample. Among the blacks the corresponding proportions were three-fourths and slightly over one-half. Nevertheless, it is of interest that among whites, the proportion in the highest asset bracket--over \$50,000--was slightly higher for retirees than for the total sample (24 percent versus 22 percent).

Table 5.18 Total Net Assets,^a 1966 and 1971, Respondents Already Retired in 1969 but Not Retired in 1966, by Race

(Percentage distributions)

Total net assets ^b	WHITES		BLACKS	
	1966	1971	1966	1971
Number of respondents ^c	110	110	48	48
Total percent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
0 or negative	14	16	52	48
\$1-4,999	17	17	26	26
5,000-9,999	12	10	9	14
10,000-19,999	19	10	9	8
20,000-49,999	17	24	2	5
50,000 or more	22	24	2	0
Median	\$11,685	\$13,330	\$ 0	\$25

a Respondents already retired in 1969 but not retired in 1966.

b Data include the net value of automobile(s) in 1971, but not in 1966.

c Totals include 27 white men and 7 black men for whom information on assets was not ascertained for 1966 and 29 whites and 10 blacks for whom data are not available for 1971.

V SUMMARY AND CONCLUSIONS

Retirement before the conventional age of 65 has become increasingly common in recent years and the trend is likely to continue. This chapter has attempted to identify the factors associated both with the expectation of early retirement on the part of those middle-aged men still in the labor force in 1971 and with the actual retirements that occurred over the five-year period 1966-1971. "Retirement" in the latter context has been defined in two ways: by the declaration of the respondent that he had "already retired from his regular job" and by the occurrence of a substantial reduction in hours in the labor force between the two-year periods 1965-1967 and 1969-1971. The chapter has also provided a profile of early retirees as of 1971 in terms of demographic characteristics, health condition, post-retirement work experience and plans, and financial situation.

Our general hypothesis has been that the retirement decision is influenced by a variety of factors that can be categorized under the headings of financial need, financial resources in the absence of working, ability to work, economic and psychic rewards in the job, and relative preferences for leisure and work. By and large, the evidence is supportive. Virtually all of the variables that have been used to

represent the factors outlined above have been statistically significant in the multivariate analysis of at least one of the formulations of the retirement decision, and most have been significant in all three. Our model explains over a fifth of the variance in the expectation of early retirement (adjusted $R^2 = .228$) and between 6 and 11 percent of the variance in actual retirements, depending on the criterion of retirement used.

As a measure of financial need, marital status bears a statistically significant relationship to retirement expectation as well as to both measures of actual retirement. Having no dependents (other than wife) is significantly related to the expectation of early retirement, but not to the measures of actual retirement. Even more strongly related to the expectation of early retirement is the knowledge that one will be free of dependents prior to age 65. This variable could not be used in the analysis of actual retirements, since the relevant question had not been asked in the 1966 survey.

Of the economic factors that we have been able to examine, expected retirement income has been shown to be of especial importance. Among employed men in 1971, those who were eligible for \$600 or more per month in early retirement benefits from a company or union pension plan were, other things equal, more than two times as likely to contemplate early retirement as those who were not eligible for any early retirement benefits. Although we have no comparable measure of post-retirement income in the analysis of actual retirements, our proxy--length of service as of 1966 in a firm with a pension plan--bears a statistically significant relationship with the likelihood of retirement by 1971 according to each of our two measures. Our other measure of post-retirement resources--net assets--bears the hypothesized relationship both with the expectation and the occurrence of early retirement for all individuals with positive net assets.

The expected influence of poor health on the probability of early retirement is supported in all three analyses. Other things being equal, men with health problems in 1966 were twice as likely to have retired between 1966 and 1971 as those who were free of health limitations. Since the health condition used in the analysis was that reported in 1966, one can be confident that the association reflects a truly causal influence rather than a post hoc rationalization. There also appears to be at least limited support for the hypothesis that early retirement is more common among wage and salary workers than self-employed individuals because of the greater flexibility the latter group enjoys in adjusting both hours of work and, to some extent, the actual content of the job.

The hypothesized negative relationship between job satisfaction and the likelihood of early retirement is strongly supported in all three formulations. Although our hypothesis relating to the influence of psychic rewards is thus substantiated, we find no regular net relationship between average hourly earnings and either the expectation or the occurrence of early retirement. We have argued that this reflects the influence of

omitted variables that are correlated with earnings--particularly the absence of a complete measure of post-retirement income.

Finally, we find strong evidence of the influence of relative preferences for leisure and work on the retirement decision. Our measure of commitment to the work ethic bears a highly significant inverse relationship both with the expectation of early retirement and with its occurrence. Additionally, attitudes toward retirement measured in 1971 show a very strong relationship with the expectation of early retirement in that year.

Most of the findings that have been outlined above are consistent with those reported in a study of early retirement by Barfield and Morgan, based upon a national sample of heads of households 35 to 59 years of age and a sample of automobile workers between the ages of 58 and 63. Perhaps the major difference is one of emphasis. Barfield and Morgan conclude that "financial factors--primarily expected retirement income--are of principal importance in the retirement decision, with attitudinal variables having less influence, though usually operating in expected directions."²⁸ Our evidence, based of course on a somewhat different analytical framework, leads us to give greater weight than they do to attitudinal factors, without, however, denying the importance of economic considerations.

The difference between the cross-sectional and longitudinal relationship between age and the expectation of early retirement deserves emphasis. In the cross section, there is an inverse relationship between age and the expectation of early retirement. Yet, as our sample has aged five years, the proportion of men expressing the intention to retire prior to age 65 increased by about 10 percentage points. Because there are the same individuals at both points in time, the phenomenon cannot be attributed to generational differences in attitudes. It doubtless reflects the increasing prevalence and liberality of early retirement provisions in pension plans, as well perhaps as some genuine changes in preferences for leisure relative to income.

When one examines the characteristics and status of middle-aged men who regard themselves to be retired, the influences of a number of the factors described above are evident. Relative to the total cohort of men, the early retirees are less likely to be white collar workers, less likely to have been self-employed, less likely to be married and to have dependents, and much more likely to have health problems.

It is the health factor that is most pronounced. Over half of the early retirees had reported health problems in 1966, as compared with a fourth of the total cohort, and by 1971 these proportions were about eight-tenths for the retirees and three-tenths for the total cohort.

²⁸ Barfield and Morgan (1969), p. 3.

Moreover, of those who had health problems in 1971, close to half had such serious functional limitations that locomotion was either impossible or difficult. Only between a fifth and a fourth of those with health problems had no functional limitations or only a minor one. Thus, considering the total group of early retirees, only about four-tenths of the white men and three-tenths of the black men were substantially free of limitations.²⁹

Very few of the early retirees--under 10 percent--have had any labor market activity since retirement, and there is no evidence that the proportion who plan or want to work is any higher. It is noteworthy that these proportions do not vary according to health status.

The 1970 total family income of the early retirees was, of course, not only substantially below the income of the total age cohort, but also well below what their own incomes had been prior to retirement, both in money and in real terms. Among those who retired between 1966 and 1969, the actual purchasing power of median family income dropped between 1965 and 1970 by about one-half for white men and one-tenth for blacks. Nonetheless, by no means all of the retirees were in dire financial straits in 1970. About two-fifths of the whites and over one-fourth of the blacks had family incomes of \$6,000 or more. On the other hand, over two-fifths of the whites and almost three-fifths of the blacks were receiving less than \$4,000. Significantly, men who in 1966 had anticipated early retirement were, on average, better off than those who had not.

From all of the evidence, it appears that men who retire in their fifties and early sixties fall into one or the other of two quite different categories. The more fortunate are those for whom the decision to retire is in a real sense voluntary. Their health is reasonably good, they are attracted by the freedom from regular work, and they believe that their financial resources are sufficient to permit them this freedom. These are the individuals represented by the smiling faces in advertisements explaining how one can "retire at age 55 with financial security."

In the other category are those for whom the term retirement, with its usual connotations, is really a misnomer. These are the men who are really forced out of the labor market by disability that may be quite sudden--witness the large increase in the incidence of health problems between 1966 and 1970 among the men who retired during that period--or that may result from the increasing severity of health problems or physical conditions of relatively long standing.

²⁹ These estimates are derived by adding to the proportion of men who report no health problems the proportion who have health problems that involve at most a "minor functional limitation."

It is not possible to quantify precisely the relative proportions of these two groups among the early retirees in our sample. Nevertheless, it seems safe to say that the "involuntary" retirees are relatively more numerous among men in their fifties than among those in their sixties and among black men than among whites. Overall, they probably constitute about three-fifths of all the retirees.³⁰

The lamentable position of the "involuntary" early retirees should not obscure the fact that substantial numbers of individuals in good health look forward to retirement prior to age sixty-five, and that these numbers will probably increase. At the same time, the evidence adduced in this study also points to the fact that there are many other individuals who apparently regard retirement as unattractive, irrespective of its financial feasibility.

³⁰ These rough estimates are based upon the proportions of the several age-color groups who reported health problems that involve functional limitations that are "moderately severe" or worse.

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CHAPTER VI

INTERNAL-EXTERNAL CONTROL AND LABOR MARKET EXPERIENCE

by

Paul J. Andrisani and Gilbert Nestel*

I INTRODUCTION

In an economic system in which individuals may freely choose among various employment opportunities, the effective allocation of human resources depends upon workers exercising initiative in pursuit of their particular employment goals. In theory, differentials in economic rewards--given variation in worker preferences--are presumed to attract individuals into those jobs in which their contribution to social product will be at a maximum. In equilibrium, therefore, no worker could enhance either his own satisfaction or the total social product by making any kind of job change. But this can occur only if all workers are responsive to the incentives of the marketplace and to the promptings of their particular goals--i.e., if workers have the initiative to succeed.

Conceptually, individual differences in initiative are possible at every level of skill and ability. College graduates, for instance, do not all have equally high degrees of initiative, nor are all high school dropouts necessarily lacking in it. On the contrary, it is possible if not in fact likely, that equally qualified workers vary in levels of initiative even within a particular firm and a specific job classification.

To a large extent, such differences doubtless reflect variation among individuals in the payoffs they ascribe to initiative, or, to use the language of Julian Rotter (1966; 1971; 1972), differences in perceived "internal-external control." In the framework of Rotter's (1966) social learning theory, internal-external control refers to the

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degree to which an individual perceives success as being contingent upon personal initiative. At one end of the continuum are the highly internal--i.e., those who perceive effort to be largely instrumental in attaining success. At the opposite end of the spectrum are the highly external--those who ascribe little or no value to initiative since, in the extreme case, success is viewed as completely unrelated to ability and effort. Expressed in simplest terms, the stronger the perceived relationship between initiative and success, the more worthwhile initiative becomes and the more likely it is to be demonstrated.¹

For research inquiring into the role of initiative in the context of labor market experience, the construct of internal versus external control is particularly appropriate. The internal's belief that success results from hard work and that failure is an individual responsibility, for instance, is firmly rooted in a Protestant work ethic. As a consequence, individual differences in internal-external control also reflect varying degrees of commitment to the work ethic and value system embraced by the mainstream of the American work force. Additionally, although there has been little evidence from which to judge, there are some who even suggest that white-black differences in labor market experience stem mainly from racial differences in work ethic attitudes closely resembling internal-external control.²

The perceived payoff to initiative is also the crucial factor in what has become known as "expectancy theory" of work motivation.³ While there are several elaborations of the basic expectancy formulation, they all agree that the perception of a relationship between effort and success is important in generating initiative. Finally, the construct of internal-external control is also relevant to labor market research in that initiative--i.e., an internal attitude--may be affected by an individual's labor market experience as well as being a determinant thereof. The influence of labor market forces on a social psychological

¹In reviewing the literature addressing the relationship between feelings of internal-external control and behavioral manifestations of initiative, Rotter (1966) and Lefcourt (1966) have provided impressive evidence of construct validity. Furthermore, each has demonstrated that internal-external control can be measured reliably by a variety of methods.

²See, for example, the writing of Lewis (1961; 1969); Banfield (1970); and Moynihan (1967).

³For reviews of this literature see: Vroom (1964); and Porter and Lawler (1968).

attitude as important as this--an individual's perception of personal efficacy--is a matter that has elicited increasing policy concern in recent years.⁴

Despite the fact that the literature on internal-external control is quite voluminous,⁵ and although manpower researchers have become increasingly mindful of the importance of such attitudes in the analysis of labor market experience, research efforts have hardly begun to explore systematically the role of internal-external control as either a contributor or an outcome in the dynamics of work experience.⁶ The purpose of this chapter is to contribute to filling this void by utilizing the National Longitudinal Surveys' sample of middle-aged males. The data represent what is to our knowledge the first longitudinal data set on a national sample that has administered a measure of internal-external control at more than one point in time while also collecting a wealth of work history information.

II OBJECTIVES OF THE RESEARCH

Specifically, this study has two major objectives. First, it examines the influence of internal-external control on a number of facets of labor market experience during the 1969-1971 period by way of both cross-sectional and longitudinal analysis. In the cross-section

⁴The growing manpower policy concern for the degree to which such attitudes affect and are affected by the labor market experience of individuals is clearly evinced in a number of recent studies. See, for example: Andrisani (1973); Adams and Nestel (1973); Goodwin (1972); Gurin (1970); Gurin and Gurin (1974); Parnes et al. (1970); Quinn et al. (1970); Quinn and Mangione (1973); Quinn et al. (1974); and Work in America (1972).

⁵For reviews of this literature see: Rotter (1966; 1972); Lefcourt (1966; 1972); and Joe (1971).

⁶To a considerable degree, research efforts historically have been hampered by the unavailability of longitudinal data on large national samples. Without longitudinal data it is not possible to examine either the relationship between attitudes and subsequent labor market experience, or the relationship between labor market experience and change in attitudes. Moreover, without large national samples it is not possible to examine carefully, for example, age, sex, and race differences in relationships, nor is it possible to generalize from the sample to the population as a whole.

the dimensions of experience include occupational status, average hourly earnings, and job satisfaction. Capitalizing on the longitudinal data, the study also examines the influence of internal-external control in 1969 on such subsequent work experience variables during the 1969-1971 period as annual earnings, perceived financial progress, incidence of unemployment, and change between 1969 and 1971 in occupational status, average hourly earnings, job satisfaction, and annual earnings.

In each case our interest is in ascertaining whether internal-external control has an influence independent of skills, abilities, and selected demographic characteristics that are known to be related to labor market experience.⁷ Additionally, by examining the influence of internal-external control on labor market experience for whites and blacks separately, we seek to gain insight into whether racial differences in labor market experience are due more to a lower propensity among blacks to possess an internal outlook, or to lower "returns" to an internal outlook for blacks than for comparable whites.

The second major objective of the study is to ascertain the degree of stability in internal-external attitudes among middle-aged males over a two-year period--1969 to 1971--and to determine whether labor market forces are correlated with whatever changes in attitude are found to exist. The longitudinal nature of the NLS data allow us to test an implicit assumption in much of the literature on internal-external control and in much of the theorizing concerning the relationship between initiative and poverty--that an internal-external attitude is a relatively stable personality characteristic. The primary question is whether a cohort of middle-aged males, whose self-concepts have been formed over a considerable number of years, will systematically modify internal-external outlooks in light of changing economic fortunes. If so, this clearly implies that the removal of barriers to labor market opportunities will be translated into meaningful incentives for increased initiative on the part of workers.

Some important aspects of labor market experience whose influence on attitudes will be examined include change in earnings, occupational status, and labor force status; extent of unemployment; and incidence of layoff and dismissal. In carrying out this analysis, it is possible

⁷As Seeman (1972a, p. 482) has noted, internal-external control "may contribute very little independent understanding of participation and social action when the proper (and multiple) controls are applied." By simultaneously controlling for a wide range of variables known or suspected to be correlated with both internal-external control and dimensions of labor market experience, this portion of the analysis provides an important supplement to previous evidence assessing construct validity of the attitude. As an example of the latter, see Valecha (1972).

to control for a number of characteristics of the men, including several dimensions of their labor market experience at the beginning of the 1969-1971 period--viz. occupation and skills, earnings, and class of worker.

III CONCEPTUAL FRAMEWORK

Before proceeding to examine empirically the interrelation between internal-external control and labor market experience, there are three conceptual issues which may profitably be discussed. The first involves the ways in which an internal-external attitude may be translated into labor market success or failure. The second relates to the possible effects of internal-external attitudes on racial differentials in labor market experience. The third concerns the importance of exploring the effects of labor market forces on perceptions of internal-external control.

Internal-External Control as Contributor

Although the literature on internal-external control has given little attention to the role of this attitude as a determinant of labor market experience, it is possible to argue by analogy that internal-external attitudes have an important effect on socioeconomic attainment. The literature on internal-external control contains strong evidence that perceived efficacy in relation to one's environment--i.e., an internal attitude--reflects a propensity to influence that environment, a mark of initiative and competence.⁸ Furthermore, it is a relatively straightforward exercise to develop from this literature several ways in which internal-external outlooks might influence labor market experience.

Since internals perceive greater merit in the expenditure of effort than externals, for example, they may search the labor market more carefully for job opportunities and better avail themselves of those

⁸ As Rotter (1966, p. 25) has noted: "A series of studies provides strong support for the hypotheses that the individual who has a strong belief that he can control his own destiny is likely to: (a) be more alert to those aspects of the environment which provide useful information for his future behavior; (b) take steps to improve his environmental condition; (c) place greater value on skill or achievement reinforcements and be generally more concerned with his ability, particularly his failures; and (d) be resistive to subtle attempts to influence him."

which arise.⁹ By having their labor market "antennae" more finely tuned to ways of exploiting relative advantage, internals may also invest in greater amounts of and more valuable types of vocational skills, and more effectively utilize the talents they come to possess.¹⁰ As a consequence of more diligent preparation for work, more careful scanning and exploitation of job opportunities, and more fully utilizing their potential, internals are expected to be employed in the higher status, better paying, and psychologically more satisfying jobs. In addition, internals are also expected to be less prone to unemployment, and more likely to advance in their careers.

It should not be overlooked, however, that employer efforts to identify, hire, and promote individuals with initiative may also help to explain an association between internal-external control and labor market experience. To the extent that employers can differentiate internals and externals, they may screen workers on the basis of their expected propensity to exercise initiative in discharging their responsibilities. Personal interviews, letters of recommendation, and psychological testing, for example, typically serve this purpose in the hiring process, while performance records and supervisory ratings are often used to differentiate candidates for advancement, layoff, or dismissal.

Internal-External Control and White-Black Differentials

Originally coined by anthropologist Oscar Lewis in 1961, the concept of a poverty culture has taken root more quickly than almost any other social term in the past decade.¹¹ It has provided an explanation for the entrenchment of poverty despite continued prosperity and monumental social-welfare legislation, and it has been broadly interpreted to provide a basis for several aspects of manpower policy.¹²

⁹There is considerable evidence to support the notion that internals differ systematically from externals in seeking and utilizing information regarding important life situations. See, for example, Seeman and Evans (1962); Rotter (1966; 1972); and Phares (1968).

¹⁰There is some previous evidence from the National Longitudinal Surveys that supports this line of thought. See Valecha (1972); and Parnes et al. (1973).

¹¹Lewis (1961; 1969). Also see Banfield (1970); and Moynihan (1967).

¹²As Gurin (1970, pp. 85-86) has noted: "Most training programs devoted to the hard-core unemployed have viewed problems as psychological and motivational, not just deficiencies in skill and education." Mangum (1969, p. 101) also noted that manpower training and work programs of the sixties were to a large degree rooted firmly in a poverty culture rationale in that they "all assumed that the solution was to change the worker by adding to his skills and experience or changing his attitudes."

In the study that initiated the poverty culture concept, Lewis observed that the poor of all industrialized countries resemble each other more than they resemble their nonpoor countrymen--especially in terms of attitudes such as fatalism, which is virtually identical to Rotter's concept of externality. Lewis concluded, in essence, that cultural differences in these important attitudes perpetuate economic inequality from one generation to the next. The poor are poor, he argued, because they have inherited a faulty culture which embraced a value system incompatible with the American work ethic. More specifically, it was argued that this culture places little value on initiative as a means toward upward mobility, and thereby generates low levels of initiative among the poor.

Although it is clearly not true that all blacks are poor or that all whites are nonpoor, white-black differences in labor market experience are often approached from a poverty culture perspective, since poverty is more common among blacks than among whites. However, in sharp contrast to this explanation of white-black differences, a number of researchers have maintained that observed patterns of motivational attitudes are largely endogenous to the socioeconomic system.¹³ Rather than white-black differentials in labor market experience deriving from a lower propensity of blacks to have an internal outlook, it is contended that racial differentials in experience may also result from lower "returns" to the initiative of blacks. Thus, the fact that blacks perceive less payoff to their initiative than is perceived by comparable whites, may result solely from a well founded realization that the labor market rewards black initiative less highly than it does the initiative of whites. That is, lower levels of internal control among blacks may be viewed as a consequence, as opposed to a cause, of white-black differentials in labor market experience. As Gurin and Gurin have noted:

... the expectancy aspect of motivation emphasizes psychological forces that mirror the environment itself. We argue that expectations of success must be very low and externally based where the environment is so constraining. Expectancies can only begin to facilitate mobility and achievement where some opportunity exists.¹⁴

While neither denying the existence and importance of labor market discrimination, nor being necessarily in sympathy with a poverty culture

¹³See, for example, Valentine (1968); Gurin (1970); and Goodwin (1972).

¹⁴Gurin and Gurin (1974), p. 42, n. 6.

approach, there are some who nonetheless argue that initiative is more valuable for blacks than whites. Coleman et al. (1966), for example, found that attitudes closely resembling internal-external control were of considerably greater importance for educational attainment among blacks than whites. Similarly, Duncan et al. (1972) have argued that it is precisely where social conditions are not amenable to achievement that personal initiative is most essential. Unfortunately, there is little empirical evidence relating to the importance of internal-external control in explaining white-black differences in labor market experience.

Internal-External Control as Outcome

There are several compelling reasons for exploring the stability of internal-external attitudes over time, especially among a cohort of middle-aged males. Most importantly, perhaps, is that it tells something about whether the removal of barriers to labor market opportunities will be perceived as increasing the payoff to initiative, and thereby generate increased initiative on the part of workers. Additionally, examining the stability of internal-external attitudes sheds light on an implicit assumption in the literature on internal-external control and on a crucial tenet of the poverty culture thesis. In the former case, it becomes somewhat suspect to consider internal-external attitudes as a personality variable--as is typically done--if they are found to be susceptible to short term changes in environmental conditions. In the latter case, the central notion that poverty is "culturally" determined is seriously damaged should the perceived payoffs to initiative respond systematically to objective realities of the marketplace.

Still another interest in exploring the stability of this attitude stems from the current public policy concern for the quality of the context in which people must work and live, and for the degree to which social and economic institutions serve the psychological as well as the economic needs of workers. Moreover, the concept of internal-external control is particularly relevant because of its similarity to the concept of alienation. Indeed, the particular variant of alienation which is encompassed by the internal-external control variable--a feeling of powerlessness--is perhaps the most interesting from an historical perspective.¹⁵ It is, for example, the variant of alienation most prominent in the early writings of Marx.¹⁶

¹⁵The resemblance between internal-external control and alienation as "powerlessness" is discussed thoroughly in Seeman (1959; 1972a; 1972c); and Rotter (1966, p. 3).

¹⁶As Fromm (Faunce, 1968, p. 85) has noted: "Alienation (or 'estrangement') means, for Marx, that man does not experience himself as the acting agent in his grasp of the world, but that the world

In the sociological theory of "mass society," and in the major thesis of *Work in America* (1972), alienation in its various forms is a crucial intervening variable in social processes by virtue of its responsiveness to social conditions. That is, alienation is both affected by the social environment--by the organization of work in particular--and also instrumental in influencing social behavior, especially at the work place.¹⁷

Although there is considerable evidence that direct cultural teaching influences the development of internal-external attitudes,¹⁸ there has been little empirical evidence examining the extent of attitudinal change over time.¹⁹ The fact that the internal-external control measure was administered in 1969 and again in 1971 to the same sample of individuals places us in the fortunate position of being able to examine the role of internal-external control as an outcome of, as well as a contributor to, labor market experience. Additionally, by addressing this issue among a cohort of middle-aged males, whose attitudes one might reasonably expect to be the most stable of almost any age-sex cohort, the hypothesis of attitudinal responsiveness is essentially tested in the limit. That is, should internal-external attitudes respond systematically to labor market experience among these middle-aged males, it is most likely that they respond to labor market forces among other age-sex cohorts as well.

IV EMPIRICAL ANALYSIS

For purposes of this analysis, internal-external control will be measured by a respondent's score on an 11-item abbreviated version of

(nature, others, and he himself) remain alien to him. They stand alone and against him as objects, even though they may be objects of his own creation."

¹⁷See, for instance, Seeman (1972a); Walter (1964); Sheppard and Herrick (1972); and *Work in America* (1972).

¹⁸See Rotter (1966, p. 24); Hsieh et al. (1969); MacDonald (1971a); Powell and Vega (1972); Seeman (1972a); and Lifschitz (1973).

¹⁹For a sampling of the research which has at least explicitly entertained this consideration, see Gorman (1968); Gurin (1970); Smith (1970); MacDonald (1971b); Schneider (1971); Lefcourt (1972); Seeman (1972a); Wolfe (1972); Diamond and Shapiro (1973); Foulds et al. (1974); and Gurin and Gurin (1974).

Rotter's (1966) Internal-External Control Scale. These items--selected from the original 23-item scale because they appeared to be more general, adult oriented, and work related--were administered in identical form in the 1969 and 1971 surveys.²⁰ Assigning each item a score from 1 to 4 on the basis of increasing external control, scores on this scale may range from 11 to 44. In interpreting the empirical results, it should be kept in mind that the lower the score, the greater the degree of internality (initiative).²¹

Internal-External Control as Contributor

Cross-sectional relationships between internal-external control and occupational status, average hourly earnings, and job satisfaction²² are presented by race in Table 6.1. For each of these aspects of labor market experience, the relationship is analyzed using data from the 1969 survey and then reexamined using information from the 1971 round of interviews. Longitudinal relationships between internal-external control and seven other dimensions of labor market experience are presented by race in Table 6.2 and 6.3. Table 6.2 presents the data

²⁰ Since the omission of 12 items from the original test implied an approximate halving of the possible range of scores, the format of the 11 items selected was elaborated to avoid such a shrinkage. A pretest of both the original and modified versions with the same group of subjects revealed that they produced nearly identical measures. For a more complete description of the abbreviated version, see the Appendix to this chapter.

²¹ Kuder-Richardson internal consistency reliability estimates were 0.746 for the administration of the 11-item scale in 1969 and 0.749 for the administration in 1971. These internal consistency reliability estimates are based upon the entire cohort of middle-aged respondents for whom complete information was ascertainable. For a further discussion of internal consistency reliability estimates--including the method of calculation and the estimates by race--and for an item analysis of the 11-item scale, see the Appendix to this chapter.

²² Measured by a dichotomous variable which assigns the value 1 if the respondent is "highly satisfied" with his job, and 0 otherwise. In the case of this and all other dichotomous dependent variables in the analysis, the respective regression coefficients have been multiplied by 100 to express them in percentage terms.

Table 6.1 Regression Results--Net Relationships between
Internal-External Control and Occupational Status,
Average Hourly Earnings, and Job Satisfaction, by
Race^a

(t-ratios)

Net relationships	WHITES	BLACKS
<u>Internal-external control in 1969</u>		
Occupational status, 1969	-0.5 (-4.52)**	-0.1 (-0.83)
Average hourly earnings, 1969	-0.03 (-3.60)**	-0.01 (-1.32)*
Job satisfaction, 1969	-1.7 (-6.50)**	-0.3 (-0.74)
<u>Internal-external control in 1971</u>		
Occupational status, 1971	-0.5 (-4.55)**	0.1 (0.88)
Average hourly earnings, 1971	-0.04 (-3.62)**	-0.02 (-2.52)**
Job satisfaction, 1971	-1.1 (-4.40)**	0.2 (0.43)

a Respondents 50 to 64 years of age in 1971 who were employed full time as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. In each case, the net relationships have been obtained controlling for education, training, health, tenure, age, marital status, region of residence, and city size. Complete results of the regression analyses from which these data were derived are presented in Appendix A. For a complete description of all variables and their units of measurement, see text or Glossary.

** Significant at $\alpha \leq .01$.

* Significant at $\alpha \leq .10$.

Table 6.2 Regression Results--Net Relationships between Internal-External Control in 1969 and Annual Earnings 1970, Perceived Financial Progress 1969-1971, and Unemployment 1969-1971, by Race^a

(t-ratios)

Net relationships	WHITES	BLACKS
<u>Internal-external control in 1969</u>		
Annual earnings, 1970	-91 (-3.99)**	-93 (-4.06)**
Perceived financial progress, 1969-1971	-0.9 (-3.49)**	-0.3 (-0.76)
Unemployment, 1969-1971	-0.2 (-1.23)	0.4 (1.71)*

a Respondents 50 to 64 years of age in 1971 who were employed full time as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. In each case, the net relationships have been obtained controlling for education, training, health, tenure, age, marital status, region of residence, and city size. Complete results of the regression analyses from which these data were derived are presented in Appendix A. For a complete description of all variables and their units of measurement, see text or Glossary.

** Significant at $\alpha \leq .01$.

* Significant at $\alpha \leq .05$.

Table 6.3 Regression Results--Net Relationships between Internal-External Control in 1969 and Subsequent Changes in Occupational Status, Average Hourly Earnings, Job Satisfaction, and Annual Earnings, by Race: Total Sample and Respondents with Same Employer^a

(t-ratios)

Net relationships	WHITES		BLACKS	
	Total sample	Respondents with same employer 1969-1971	Total sample	Respondents with same employer 1969-1971
<u>Internal-external control in 1969</u>				
Change in occupational status, 1969-1971	-0.05 (-0.77)	-0.02 (-0.35)	0.19 (1.89)	0.17 (1.66)
Change in average hourly earnings, 1969-1971	0.01 (1.18)	0.01 (1.15)	-0.01 (-1.37)*	-0.01 (-1.01)
Change in job satisfaction, 1969-1971	-0.01 (-1.79)**	-0.01 (-2.11)**	-0.01 (-1.38)*	-0.00 (-0.97)
Change in annual earnings, 1968-1970	- .99 (-2.81)***	- 109 (-2.80)***	- 44 (-2.58)***	- 34 (-2.05)**

^a Respondents 50 to 64 years of age in 1971 who were employed full time as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. In each case, the net relationships have been obtained controlling for education, training, health, tenure, age, marital status, region of residence, and city size. Complete results of the regression analyses from which these data were derived are presented in Appendix A. For a complete description of all variables and their units of measurement, see text or Glossary.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

relating to annual earnings, perceived financial progress,²³ and unemployment;²⁴ Table 6.3 deals with changes²⁵ in occupational status, average hourly earnings, job satisfaction, and annual earnings.²⁶

In each of the tables, multiple regression analysis has been used to render all relationships net of individual differences in education, training, health, tenure, age, marital status, region of residence, and city size.²⁷ To control for race, and to examine the hypothesis that

²³ Measured by a dichotomous variable which assigns the value 1 if the respondent reports that he has advanced financially during the period 1969-1971, and 0 otherwise.

²⁴ Measured by a dichotomous variable which assigns the value 1 if the respondent experienced any weeks of unemployment during the period 1969-1971, and 0 otherwise.

²⁵ In all cases the value reported in the 1969 survey is subtracted from the value reported in 1971. For job satisfaction, the values for each year range from 1 to 4 in terms of increasing job satisfaction.

²⁶ In all cases, status on the particular dimension at the beginning of the period has also been statistically controlled, both to compare internals and externals who were otherwise comparable at the beginning of the period, and to minimize effects of "regression toward the mean."

²⁷ Each of these control variables has been measured as follows: (a) educational attainment--in terms of four categorical variables: 0-8, 9-11, 12, and 13+ years of schooling; (b) incidence of training--assigned the value 1 if received training, and 0 otherwise; (c) health status--1 if there were no health limitations on work, and 0 otherwise; (d) tenure--actual years with present employer; (e) age--measured by three categorical variables: 50 to 54, 55 to 59, and 60 to 64 years of age as of 1971; (f) marital status--assigned the value 1 if married with spouse present, and 0 otherwise; (g) region of residence--1 if non-South, and 0 otherwise; and lastly (h) city size--measured by three categorical variables based on size of respondent's local labor market: less than 200,000; 200,000 to 699,999; and 700,000 or more. In each case where categorical variables have been used--namely with educational attainment, age, and city size--the first category has been the omitted one and hence constitutes the reference group. The date to which each of these control variables applies is noted in the tables displaying the complete regression results. See Appendix Tables 6A-1 to 6A-5.

"returns" to initiative are lower for blacks than for comparable whites, separate analyses are conducted for whites and blacks. Additionally, in all cases the universe includes only those middle-aged men who were employed full-time as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. Thus, the group under investigation has stronger-than-average ties to the work force. Table 6.3 also presents data for a subset of this universe--those who remained with the same employer throughout the 1969-1971 period.

Especially among whites, there is considerable support for the hypothesis that internal-external attitudes bear an independent relationship to labor market experience. For seven of the ten dimensions of labor market experience examined among whites, and for four of the ten among blacks, the net relationships between internal-external control and aspects of experience are statistically significant at the 5 percent level. As has been noted, some of the dependent variables have been used in more than one regression; in 12 of the 17 regressions for whites and in 5 of the 17 for blacks, a statistically significant (5 percent) net relationship was obtained. Confidence in these findings is strengthened by the high degree of similarity in the 1969 and 1971 cross-sectional results for both race groups, and by the fact that the hypothesis receives support from longitudinal data as well.

It is also important to note that there is some evidence among both whites and blacks that initiative is translated into labor market success among those who remain with the same employer as well as among those who change employers. This suggests that there are several ways in which initiative may lead to success. Among the total sample of workers, internals may tend to seek out more advantageous employment opportunities and to advance more rapidly than comparable externals by having greater awareness of, and being more responsive to, labor market opportunities. But for internals who do not choose to shift employers there are other ways in which to advance. Their greater initiative is apparently recognized and rewarded by employers through greater intrafirm opportunities for advancement.

More specifically, the cross-sectional data for whites suggests that "internals" are in the better occupations, that they attain greater status, earn more money, and tend to be more highly satisfied with their work than comparable externals. The longitudinal data also suggest that white internals experience more favorable labor market circumstances than their external counterparts; namely, greater annual earnings, and more pronounced advancement in earnings and job satisfaction both within firms and through interfirm mobility. Also, it is notable that the objective realities of their advancements were not lost upon them, as white internals were more likely than externals to have perceived economic progress during the 1969-1971 period. They were not, however,

less prone to unemployment than comparable externals, nor were they more likely to advance in terms of occupational status or average hourly earnings.²⁸

Among blacks, internals were also more likely to earn more than their external counterparts--on both an hourly and an annual basis. As was also the case with whites, black internals tended to advance more rapidly than comparable externals in terms of annual earnings. Additionally, they were less prone to unemployment than externals, and there was some evidence that advancement was attained within the firm as well as through mobility in the labor market at large.

Although internal-external attitudes appear to exert a systematic influence on a number of aspects of labor market experience among both blacks and whites, the data in the main suggest that these attitudes influence work experience less for black middle-aged males than for their white counterparts. In particular, unlike the findings for whites, black internals were no more likely than comparable black externals to be employed in the better, higher status jobs (Table 6.1). Nor were they more likely than externals to be highly satisfied with their work or to perceive themselves as having made economic progress (Tables 6.1 and 6.2). Finally, while the influence of initiative on annual earnings appears virtually identical for whites and blacks (Table 6.2), the influence of initiative on average hourly earnings in both 1969 and 1971 (Table 6.1), and on change in annual earnings (Table 6.3), appears to be considerably less for blacks than whites.

The most notable exception to these white-black differences in apparent "returns" to initiative occurs in the case of unemployment. The more external the black man, the more likely he was to have experienced unemployment, but no such relationship is evident for the whites. Although we cannot be certain, it is possible that this racial difference reflects institutional arrangements governing layoff and dismissal. Since whites are disproportionately represented in the better jobs, layoffs and dismissals may be dictated on the basis of administrative procedures to a greater extent than is typical in the

²⁸The reader should be cautioned, however, against too readily accepting the null hypothesis that individual differences in initiative are unrelated to advancement in occupational status and average hourly earnings. The brevity of the period being studied, the state of the economy during the period, the age of this sample, the difficulty in measuring occupational advancement, and the difficulty in regressing change scores, all argue for further investigation of these relationships.

lower status jobs generally held by the blacks.²⁹ For example, where layoffs are completely determined on the basis of administrative policies, employers may have little recourse other than to follow these policies and to ignore the initiative of those in line for layoff. Where institutional arrangements are virtually absent, on the other hand, the initiative of workers may be an extremely important consideration in deciding who is to suffer layoff.

The most plausible way in which the "returns" to initiative may be systematically lowered for blacks is through their relegation to jobs that are inferior to those of comparably qualified whites.³⁰ Through this form of labor market discrimination, the underutilization of black talent and initiative would explain why initiative appears to have less effect for blacks than for whites on hourly earnings, growth in annual earnings, perceived progress, and job satisfaction. Moreover, should internal-external attitudes respond systematically to labor market experience, the lower degree of internality among blacks may be a realistic response to an opportunity structure which actually offers less payoff to their initiative.³¹

An indication of the magnitude and seriousness of underemployment among middle-aged blacks can be derived from the complete regression results pertaining to occupational status shown in Appendix Table 6A-2. Whites are, on the average, twice as high in occupational status as blacks--the mean Duncan Index scores being 41 and 21 points on the 97-point status scale. By substituting the mean values for whites on the internal-external control scale--and on every control variable included in the analysis--into the regression equation for blacks,

²⁹This is essentially the distinction made by Doeringer and Piore (1971; Ch. 8) in their concepts of "primary" and "secondary" labor markets. In the primary sector, workers are predominantly white and administrative procedures are a principal characteristic which distinguishes this sector from the secondary labor market--where workers are disproportionately black and personnel policies are dictated by the forces of the marketplace to a considerably greater extent than by institutional arrangements.

³⁰For a detailed analysis of patterns of white and minority employment, see Heistand (1964).

³¹In 1969, the mean score on the 11-item internal-external scale for this subset of respondents was 22.0 for whites ($\sigma = 5.7$) and 24.6 for blacks ($\sigma = 5.6$). In 1971, the corresponding figures were 22.5 ($\sigma = 5.8$) and 24.9 ($\sigma = 5.7$), respectively.

we may derive an estimate of the mean occupational status blacks would have attained had they been equal to whites in internal-external attitudes and in every other respect for which we are able to control.³² This estimate indicates that about one-fourth of the 20-point differential in occupational status is attributable to the combined influence of racial differences in internal-external control, education, training, health, tenure, age, marital status, region of residence, and city size. What these findings clearly suggest is that historical restrictions on the occupational entry of these middle-aged blacks have resulted in lower "returns" to black skills, abilities, and initiative. Black-white differences therefore appear to result more from these lower returns, than from deficiencies among blacks in all of these measures of abilities, skills, and initiative combined.

It may be possible, however, to reconcile these findings with those of others--for example, Coleman et al. (1966)--who have suggested that initiative is more important for blacks than whites. Since few studies have examined the influence of internal-external attitudes on labor market achievement, it is quite likely that there are real differences between the success criteria used by others and those of this study. Where the criterion is a scholastic achievement examination, for example, success is almost solely a function of characteristics of the individual. But where the criterion is occupational attainment, success is not only determined by the talents and initiative of individuals--i.e., by the supply side of the market--but by the opportunity structure, or "demand side," as well.

Internal-External Control as Outcome

To accomplish the second major objective of this research--an examination of the stability of internal-external attitudes over the 1969-1971 period--both the extent and the correlates of attitudinal change are explored among all members of the cohort for whom complete information is ascertainable. To measure the extent of change, we use the distribution of 1969-1971 difference scores, the cross-tabulation of 1971 by 1969 scores, and the correlation between 1969 and 1971 internal-external attitudes.

The distribution of actual difference scores on the internal-external control measure is presented in Table 6.4. As might be expected among men of this age, these findings appear to reflect a considerable stability in scores, as 72 percent of the whites and 65 percent of the

³²For a further discussion of this estimating procedure and for similar analyses of black-white differentials, see Kohen (1973; pp. 89-94); Schiller (1971); Duncan (1969); and Jencks et al. (1972).

Table 6.4 Change in Internal-External Control
Score, 1969-1971, by Race^a

(Percentage distribution)

Change in internality, 1969-1971	WHITES	BLACKS
<u>Increase in score (decreasing internality)</u>		
+15 or more	1	2
+10 to +14	3	5
+6 to +9	11	12
+3 to +5	18	16
<u>Stable score</u>		
-2 to +2	37	34
<u>Decrease in score (increasing internality)</u>		
-3 to -5	17	15
-6 to -9	9	11
-10 to -14	2	4
-15 or more	1	2
Total percent	<u>100</u>	<u>100</u>
Total number of respondents	2,187	785

^a Respondents 50 to 64 years of age in 1971 with reported internal-external control score in 1969 and 1971.

blacks changed scores by 5 or fewer points between the two dates. This stability is further demonstrated by the cross-tabulation of 1971 and 1969 scores by race (Table 6.5). It is interesting to note, moreover, that changes in scores among those at the tails of the distribution in 1969 appear to display the statistical tendency of "regression toward the mean." This suggests that some of the larger changes in scores may merely reflect measurement error.

Although these tables suggest a considerable degree of attitudinal stability over the two-year period, the zero-order correlation coefficients between 1969 and 1971 scores are markedly lower than would be expected if there were no real change in attitudes. On the basis of the internal consistency reliability estimates of 0.75 which were previously noted, internal-external control scores in 1969 and 1971 should be correlated to roughly this same degree if no real change in attitude occurred. Yet the correlation coefficients between 1969 and 1971 scores were only 0.55 for whites and 0.35 for blacks.

To assess the extent to which the observed attitudinal change is related to the respondents' experience, we have regressed the actual difference scores³³ on several dimensions of that experience over the two-year period: (a) change in occupational status, (b) change in annual earnings, (c) change in unemployment experience,³⁴ (d) change in labor force status,³⁵ (e) the incidence of involuntary separation,

³³Davidson (1972, Ch. 3) notes that where three conditions hold, the psychometric technique of "estimated true gain scores" does not order respondents any differently than raw difference scores. In fact, estimated true gain scores were observed to be, if anything, inferior to raw difference scores in such cases. These three conditions include stability of the mean, standard deviation, and internal consistency reliability estimate of the attitudinal measure over time. The Appendix to this chapter presents data which demonstrate that each of these conditions is met with this sample of middle-aged males.

³⁴Change in unemployment experience is measured by dichotomous variables resulting in four categories: (1) those with at least one week of unemployment in both 1968-1969 and 1969-1971; (2) those with unemployment in 1968-1969 only; (3) those with unemployment in 1969-1971 only; and (4) those with no unemployment in either period (reference group).

³⁵Change in labor force status is measured by dichotomous variables resulting in four categories: (1) those out of the labor force in the survey weeks of both 1969 and 1971; (2) those in the labor force in 1969 and out in 1971; (3) those out of the labor force in 1969 and in the labor force in 1971; and (4) those in the labor force at both survey dates (reference group).

Table 6.5 Internal-External Control Score in 1971 by Internal-External Control Score in 1969 and Race ^a

Internal-external control, 1969 \ Internal-external control, 1971	Total	11-14	15-18	19-22	23-26	27-30	31-36	37-44
	WHITES							
Total	2,187	174	389	563	534	311	183	33
11-14	188	63	56	38	20	8	2	1
15-18	432	60	137	140	70	19	6	0
19-22	549	32	115	182	147	55	14	4
23-26	531	10	55	136	167	111	44	8
27-30	308	6	18	51	95	71	61	6
31-36	153	3	8	12	34	41	44	11
37-44	26	0	0	4	1	6	12	3
	BLACKS							
Total	785	22	72	148	214	180	122	27
11-14	27	8	3	7	5	1	2	1
15-18	83	5	14	22	18	15	6	3
19-22	135	3	18	40	42	20	11	1
23-26	230	3	16	41	75	58	30	7
27-30	190	3	15	25	50	48	42	7
31-36	103	0	6	11	23	33	26	4
37-44	17	0	0	2	1	5	5	4

a Respondents 50 to 64 years of age in 1971 with reported internal-external control score in 1969 and 1971.

and (f) change in health status.³⁶ In this regression model we also control for status prior to the commencement of the period in terms of: (a) internal-external control, (b) occupational status, (c) annual earnings, (d) class of worker, (e) region of residence, (f) city size, and (g) race.³⁷ By so doing, we are in essence asking whether individuals who are equal in terms of internal-external control and the other indicated characteristics at the beginning of the period will change their perception of environmental control in light of changes in their personal circumstances. Additionally, the regression model has been reestimated for only those who were employed as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. The regression results for each of the universes are presented in Table 6.6.

Overall, the data suggest that internal-external attitudes are responsive to changing experience in the labor market. In particular, there is evidence that advancement in occupational status, advancement in annual earnings, re-entry into the labor force, and the absence of unemployment are systematically related to increasing internal control. In each case, moreover, the relationships are statistically significant at the 5 percent level.

In addition, systematic attitudinal change between 1969 and 1971 is also related to race, to occupational status at the beginning of the period, and to whether an individual was employed in the public or private sector of the labor market. These relationships imply that

³⁶Changes in health status are measured by dichotomous variables resulting in four categories: (1) those with health limitations in the survey weeks of both 1969 and 1971; (2) those with health limitations in 1969 but not in 1971; (3) those with health limitations in 1971 but not in 1969; (4) and those with no health limitations in either year (reference group).

³⁷To control for race, separate regressions were run for whites and blacks, and statistical tests performed to ascertain whether race differences precluded the combining of the two samples. The null hypothesis that there are no black-white differences in regression coefficients was accepted at the 10 percent level using Chow's (1960) test of equality between sets of coefficients. It should be noted that the test of regression coefficients between the white and black regressions was designed to ascertain whether a significant contribution to explanatory power would be lost by pooling regressions and controlling for race differences merely by way of a dichotomous race variable. Since the null hypothesis could not be rejected even at the 10 percent level, white and black samples were pooled and a dichotomous race variable entered into the pooled equation.

Table 6.6 Regression Results--Net Relationships between Selected Aspects of Respondents' Experience and Changes in Internal-External Control, 1969-1971^a

Aspect	Total sample		Nonagricultural wage and salary workers employed 1969-1971	
	Regression coefficients	(t-ratios)	Regression coefficients	(t-ratios)
Change in occupational status	- 0.02	(- 2.64)***	- 0.02	(- 2.09)**
Change in annual earnings ^c	- 0.04	(- 2.54)***	- 0.04	(- 1.86)**
Unemployment, 1968-1969 and 1969-1971	- 0.18	(- 0.31)	1.05	(1.85)**
Unemployment, 1969-1971 only	0.46	(1.11)	0.19	(0.23)
Unemployment, 1968-1969 only	0.52	(1.18)	0.59	(1.04)
Out of labor force, 1969 and 1971	0.15	(0.30)	b	b
Out of labor force 1969, in 1971	- 2.83	(- 2.22)**	b	b
In labor force 1969, out 1971	0.05	(0.12)	b	b
Poor health, 1969 and 1971	0.14	(0.49)	- 0.34	(- 0.87)
Improved health, 1969-1971	- 0.22	(- 0.65)	0.03	(0.07)
Deteriorated health, 1969-1971	- 0.35	(- 1.01)	0.18	(0.39)
Involuntary separation	- 0.55	(- 1.18)	- 1.22	(- 2.09)
<u>Control variables</u>				
Internal-external control, 1969	- 0.46	(-27.18)***	- 0.44	(-20.79)***
Occupational status, 1969	- 0.02	(- 3.81)***	- 0.01	(- 2.11)**
Annual earnings, 1968 ^c	- 0.02	(- 1.23)	- 0.01	(- 0.64)
Self-employed, 1969	- 0.02	(- 0.08)	b	b
Public sector, 1969	0.69	(2.57)***	0.74	(2.58)***
Non-South, 1969	0.27	(1.19)	0.42	(1.52)
Medium-size city, 1969	0.20	(0.86)	0.22	(0.80)
Large city, 1969	- 0.21	(- 0.84)	- 0.32	(- 1.09)
Race	0.85	(2.29)**	0.71	(1.60)*
Constant	11.22	(22.00)	10.35	(16.67)
R ²	0.22		0.21	
F-ratio	37.53		27.65	
Number of sample cases	2,747		1,741	

(Table continued on next page.)

Table 6.6 Continued

- a The universe of respondents for the regression results reported in columns 1 and 2 includes all males between the ages of 50 and 64 in 1971 for whom complete information was ascertainable. The universe of respondents for the regression results reported in columns 3 and 4 has been further restricted to those who were employed as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. For a complete description of all variables and their units of measurement, see text or Glossary.
 - b Variable does not enter regression because of definition of universe.
 - c Annual earnings and earnings advancement have been divided by one thousand.
- *** Significant at $\alpha \leq .01$.
** Significant at $\alpha \leq .05$.
* Significant at $\alpha \leq .10$.

blacks, those lowest in occupational status, and public sector workers were more likely to develop external outlooks during the period; while whites, those highest in status, the self-employed, and private sector wage and salary workers tended to become more internal between 1969 and 1971. Among the factors that may help to explain these relationships are the Civil Rights movement, the general prosperity of the 1965-1969 period, and the economic inroads of public sector unionism. That is, these developments may have generated expectations for further progress among these groups which were not easily fulfilled during the 1969-1971 recessionary period. By the same token, whatever gains these workers experienced during the 1965-1969 period may have been seriously jeopardized by the economic downturn of the 1969-1971 period--also contributing to increasingly external outlooks, other things equal.

These findings, in conjunction with those examining the role of internal-external attitudes as a contributor to labor market experience, suggest that internal-external attitudes both affect one's behavior toward his environment, and are affected by one's environment. Moreover, since this evidence is obtained among men between the ages of 50 and 64 in 1971, it suggests that the early formation of external attitudes is not a "shackle" which precludes an individual from upward mobility. On the contrary, it suggests that opportunities for success, and success itself, are effective means for raising initiative to succeed, and that the somewhat more external outlooks of the poor may reflect unfulfilled expectations and lower returns to initiative, rather than--or as well as--a lack of initiative.

In addition, the apparent manner in which internal-external control and the environment mutually reinforce one another, is entirely consistent with the hypothesized role of this attitude in sociological theories of alienation.³⁸ In this literature, the work experience of individuals shapes their perceptions of control over their environment, which in turn affects the way in which individuals react to their environment in future situations. More specifically, unfavorable work experiences are thought to increase tendencies toward external control, which in turn reduce the individual's willingness to participate in the institutions of his society--and in particular, in the institution of work.

Although we are aware of no survey data attesting to, or questioning, the stability of internal-external attitudes, these results are not inconsistent with some evidence derived through psychotherapy. Lefcourt (1972, p. 31) has noted the impressive consistency of the relatively few studies that have examined changes in internal-external control resulting from psychotherapy. While acknowledging some potentially serious limitations of these studies, he notes that: "As persons

³⁸See, for example, Seeman (1972a); and Walter (1964).

successfully cope with immediate difficulties, they do seem to experience an increase in personal (internal) control." Furthermore, he considers that, in the main, this evidence offers considerable support for "a theoretically probable relationship between effectiveness and increased perceptions of personal control."

Finally, it should be made explicit in interpreting our own findings that, if anything, our tests of statistical significance are unduly conservative. That is, inherent in the analysis of attitudinal change, as previously mentioned, are serious methodological difficulties which systematically underestimate the relationships observed and at the same time raise the standard errors of the estimates obtained. The measurement error which inevitably exists in the internal-external control scores, for example, reduces our ability to fit the change in scores and therefore understates the real relationships between labor market experience and attitudinal change. Also, the statistical artifact termed "regression toward the mean"--i.e., the built-in negative correlation between the initial level of a particular variable and change in that variable--introduces other statistical difficulties. In addition, the inevitably high degree of interdependence among the various measures included in the regression equation--i.e., multicollinearity--also renders conservative our tests of statistical significance by biasing upwards the standard errors of the parameter estimates.

Reinforcing these methodological difficulties are at least two theoretical considerations which also suggest that only a portion of the true relationship between labor market experience and change in internal-external control is likely to be observed. In the framework of Rotter's social learning theory (1972, pp. 1-46), expectancies may theoretically change as unexpected events are experienced and also as a function of the amount of prior experience in related situations.³⁹ Obviously, labor market experience during the 1969-1971 period for many workers--and for men of this age cohort in particular--were events which could be anticipated and for which there was considerable prior experience. Since males of this cohort had considerable work experience on which to base their expectations, and to the extent that for these men the

³⁹In Rotter's words (1972, pp. 28-29): "Social learning theory has hypothesized that there are two general variables that operate to affect the size of expectancy changes . . . With both positive and negative reinforcements, an unexpected occurrence has a greater effect than an expected one. . . . In other words, the occurrence of the . . . (event) must be of such a nature as to permit recategorization; otherwise, the person might simply regard its occurrence as random or specific to one situation only. . . . The second general variable affecting the size of expectancy changes is the number of previous experiences the subject has had in the situation."

particular labor market experiences examined in this study were predictable events, weaker relationships between work experience and change in attitude may exist than might be observed for other groups of workers--e.g., youth and women. Not only would youth and women have less work experience on which to base their expectancies, they might also be considerably more susceptible to the adverse labor market forces between 1969 and 1971 than middle-aged males who, through seniority arrangements, may have been somewhat insulated from the full force of the economic downturn.

Fortunately, each of these factors operates in the same systematic fashion--to suppress any real relationships between labor market experience and change in internal-external attitudes which may, in fact, exist. That statistically significant relationships are nevertheless observed in light of these limitations is highly suggestive of the importance of a favorable opportunity structure and of positive work experience for the development of internal attitudes.

VI SUMMARY AND CONCLUSIONS

The principal purpose of this research has been to examine the role of a particular social psychological attitude as both a contributor and an outcome in the dynamics of labor market experience. This attitude termed "internal-external control," taps the perceived payoffs to initiative and has therefore received considerable attention in behavioral science research as a generator of initiative. In particular, it has become a critical element in theories of poverty--especially among blacks. Additionally, its close conceptual linkage to a dimension of alienation--that of perceived powerlessness--has also given it a prominent place in several sociological theories (Seeman 1972a; 1972c).

The data for middle-aged males used in this study, have provided several advantages previously unavailable to researchers addressing such questions. Most importantly, to the best of our knowledge they constitute the first data set for a national sample that has been able to examine the relationship between internal-external control and subsequent labor market experience as well as the relationship between labor market experience and change in internal-external control. The fact that the modified Rotter scale was administered both in 1969 and in 1971, and that substantial information about labor market experience and attitudes for this time interval was also collected, has made such analyses possible.

Ten selected criteria of labor market success have been examined to test the hypothesis that individual differences in internal-external attitudes are related to the attainment of labor market success. The systematic relationships between internal-external control and the numerous dimensions of work experience that have been examined provide

considerable support for the hypothesis, and impressive evidence of the construct validity of the internal-external control measure. This is especially true in view of the fact that the observed relationships were independent of individual differences in skills, abilities, and demographic distribution, and were obtained on the basis of longitudinal as well as cross-sectional data.

There is also considerable support for the hypothesis that labor market success enhances one's initiative to attain further success. While there is considerable stability in internal-external control scores over this two-year period for both whites and blacks, those respondents whose labor market experience was favorable consistently exhibited a tendency toward increased internal control. Those whose labor market experience was unfavorable, by the same token, consistently exhibited a tendency toward increased external control. Finally, internal-external control scores tended to remain stable for those whose labor market situations changed little during the period. The evidence suggests, in essence, that increased opportunities for upward mobility and advancement will increase the initiative of both blacks and whites to attain success. Initiative and the experience of labor market success, therefore, appear to proceed in tandem and to be mutually reinforcing.

While this evidence is, in general, in agreement with the large body of literature relating to the influence of internal-external attitudes in other contexts, the findings are at odds with an implicit assumption underlying most of the literature on internal-external control, namely that this attitude functions as a relatively stable personality variable. In view of our finding that internal-external attitudes of middle-aged men are influenced by labor market forces, it is likely that they are even more sensitive to the work experience of the young. Thus, theories viewing this attitude to be a form of alienation which shapes, and is shaped by, the environment, have found considerable support from these findings.

Furthermore, the data are also inconsistent in at least two important respects with the findings and contentions of the Coleman Report (1966) and the poverty culture thesis. First, the "returns" to an internal attitude appear to be somewhat greater for whites than blacks. Most notably, initiative appears to be of no consequence for blacks in gaining access to the better, higher status occupations, while being of considerable importance for occupational attainment among whites. Second, internal-external attitudes were also found to reflect the opportunity structure. The greater tendency of blacks to possess an external outlook therefore reflects to some degree the objective realities of their more limited employment opportunities. Increasing the "supply" of motivated blacks, in other words, may not in itself stimulate a "demand" for their potential productivity. Rather, an individual's degree of labor market experience is a function of both the opportunity structure and the talents and initiative of the individual.

APPENDIX TO CHAPTER VI

THE NLS 11-ITEM INTERNAL-EXTERNAL CONTROL SCALE

The 11-item abbreviated version of Rotter's (1966) Internal-External Control Scale used in this study was first administered in the 1969 interview, and was administered again in identical form in the 1971 survey. The abbreviated scale was constructed by including only those items of the 23-item Rotter scale which appeared to be more general, adult-oriented, and work related. Since the omission of 12 items from the original Rotter test implied an approximate halving of the possible range of scores (from 0-23 to 0-11), the format of the 11 items selected was elaborated to avoid such a shrinkage. The modification consisted of obtaining from the respondent his opinion as to how closely his forced-choice response on each item represented his own view on the issue. ("Is this statement much closer or slightly closer to your opinion?" See item 39 in the 1971 interview schedule, Appendix D.) Thus, four scores are possible for each of the 11 items in the scale, instead of just two as in the original Rotter format:

- "1" for internal response "much closer,"
- "2" for internal response "slightly closer,"
- "3" for external response "slightly closer," and
- "4" for external response "much closer."

The total score is then obtained by summing the values of all 11 items, with the range of scores consequently being 11 to 44 in order of increasing external control.

The abbreviated scale was pretested along with the original Rotter scale on 56 students at the Columbus Area Technical School, Columbus, Ohio. The purpose of the pretest was to determine the equivalence of the measure of internal-external control produced by the 11-item scale and the complete 23-item Rotter scale. It was decided that the abbreviated version would be an acceptable substitute for the complete test if two conditions were met. First, the correlation between the abbreviated and complete version scores was required to be comparable with the test-retest and split-half correlation coefficients of about 0.70 reported by Rotter (1966) for the complete version of this scale. Second, the abbreviated version was required to be internally consistent, as demonstrated by an item analysis of the scale.

The data acquired through the pretest revealed a near equivalence of the abbreviated scale to the complete version. The correlation coefficient between the two versions was found to be 0.69, and the coefficient between the complete test and the unelaborated 11-item scale was 0.71. The item analysis of the abbreviated scale was conducted by correlating the score on each item with the score on the test minus the score on the particular item, and all of the correlation coefficients

were found to be quite comparable to the corresponding values reported by Rotter (1966). On the basis of these pretest findings, it was concluded that the measure of internal-external control produced by the 11-item abbreviated scale was nearly equivalent to the measure yielded by the complete Rotter scale.

For the first administration of the 11-item scale to this cohort of middle-aged males in 1969, internal consistency reliability estimates were 0.746 for the total sample, 0.749 for whites, and 0.672 for blacks. In 1971, the corresponding reliability estimates were 0.749, 0.752, and 0.679, respectively. In all cases, these reliability estimates have been calculated using the Kuder-Richardson Formula #8, since it involves perhaps the fewest assumptions of any internal consistency reliability estimate.¹

The mean scores on the 11-item scale were also stable over the two-year period, as were the standard deviations. For the total cohort of middle-aged males, the mean was 22.6 in 1969 and 22.8 in 1971, while the standard deviation was 5.9 in each of the years. For whites, the mean score on the 11-item scale was 22.4 in 1969 and 22.6 in 1971, with standard deviations of 5.8 in each of the years. Finally, the corresponding means for blacks were 25.4 and 25.3, respectively, with standard deviations of 5.7 and 5.8 in 1969 and 1971.

An item analysis of the 11-item scale is presented in Table 6A below. The figures in column 1 represent the correlation coefficients between the score on each of the 11 items in 1969 and the total score on the 1969 abbreviated scale minus the score on the particular item. In column 2, the corresponding figures are presented for the 1971 administration of the 11-item abbreviated scale. The third column displays the corresponding figures provided by Rotter (1966) in his item analysis for each of the 11 items selected from the complete 23-item instrument. As the data clearly suggest, there is considerable consistency between the 1969 and 1971 correlation coefficients. Additionally, in every case but one--item K--the items in the NLS study are more highly correlated with the summed scores on the remaining items than are the same items in the Rotter (1966) study. For both 1969 and 1971, moreover, internal consistency reliability estimates are not improved by the omission of the least highly correlated item--item J. This suggests that each of the 11 items contributes to the measurement of internal-external control.

¹We are grateful to Professor Robert J. Wherry of the Department of Psychology, The Ohio State University, for suggesting this procedure to us.

Table 6A Item Analysis of Internal-External Control Scale--Correlation of Each Item With Scale Score Minus Item: All Respondents

Item	Statement ^a	NLS 11-item scale		Rotter's 23-item scale ^b
		1969	1971	
a	. . . unhappy things . . . due to bad luck.	0.332	0.375	0.265
b	. . . people get the respect they deserve. . .	0.262	0.249	0.238
c	Without the right breaks, one cannot be an effective leader.	0.419	0.373	0.345
d	. . . success is a matter of hard work . . .	0.417	0.404	0.391
e	What happens to me is my own doing.	0.359	0.354	0.331
f	When I make plans I am almost certain I can make them work.	0.311	0.318	0.252
g	. . . getting what I want has little . . . to do with luck.	0.387	0.455	0.369
h	Who gets to be boss often depends on . . . luck . . .	0.420	0.429	0.295
i	Most people don't realize the extent to which their lives are controlled by accidental happenings.	0.279	0.299	0.258
j	. . . the bad things that happen to us are balanced by the good ones.	0.192	0.193	0.108
k	. . . I feel that I have little influence over the things that happen to me.	0.366	0.349	0.521
Sample size		3,559	3,576	200

a The actual questionnaire section pertaining to the administration of these items may be found in the 1971 Interview Schedule, question 39, in Appendix D.

b These results are taken from Rotter (1966), pp. 11-12.

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CHAPTER VII

CONCLUSIONS*

There is no simple way to summarize and synthesize the several papers that comprise this volume. Aside from the fact that all of them address issues that are somehow relevant to the welfare of middle-aged men, they do not fit neatly into either a single analytic or topical framework. Moreover, the need for an overall summary is questionable, since each of the papers contains a rather elaborate summary section. Nevertheless, even if a grand summary is unnecessary and perhaps impossible, there does seem to be some merit in standing back from the data and analyses that have been presented to see what broad generalizations appear to emerge and what implications, if any, they have for public policy. That is the mission of this brief concluding chapter.

One of the clearest points to emerge from virtually all of the studies is the inadequacy of facile generalizations about the labor market problems of middle-aged men, and the necessity of maintaining a balanced perspective on this issue. On the one hand, it is clear that a very substantial majority of men in this age range have no special labor market problems--they remain full-year, full-time workers, experience no unemployment, serve in jobs with which they express satisfaction, and continue to experience gains in real income even as the burden of dependency diminishes. On the other hand, the fortunate position of the majority makes no more tolerable the misfortunes of those for whom poor health or involuntary job separations lead to departure from the labor force or a slide down the occupational ladder, or, indeed, of those who have never acquired a decent and stable job. Public policy must continue to focus on remedial and ameliorative measures for such individuals, even though they are not typical of the entire age group.

The material presented in this volume contains abundant evidence of the important effect that health has on the labor market position of middle-aged men. A substantial minority of them report health conditions that limit either the amount or the kind of work they can do; among those in their early sixties the proportion is as high as two-fifths. Poor health has been shown to be an important factor in explaining withdrawal from the labor force prior to the conventional age of retirement.¹ It has also been shown to account for a major portion of the differential in labor force participation between white and black men; among men with no health problems, the labor force participation of blacks is actually slightly higher than that of whites.² Finally, even among men who remain

*This chapter was written by Herbert S. Parnes.

¹ p. 175. This and all subsequent page references are to this volume.

² p. 15.

in the labor force, health has a powerful influence on earnings and employment experience. Controlling for other human capital variables such as education and training, men who report health limitations have lower hourly and annual earnings than those with no such limitations, and also suffer more unemployment.³ In short, it is clear that efforts to improve the health of the population and thus to reduce the incidence of disability among men as they grow older would constitute an effective long-run measure for improving the labor market position of middle-aged men. In this context, proposals for a comprehensive program of health insurance deserve support not only because improved health is desirable in its own right, but because it would contribute to the amelioration of labor market problems and to fuller and more effective utilization of manpower resources.

In addition to health, other types of investment in "human capital" also have a salutary effect upon the labor market status and experience of middle-aged men. For example, other things being equal, number of years of school completed is strongly related to hourly and annual earnings.⁴ Moreover, over the five-year period covered by the study, better educated men are more likely to have moved up the occupational hierarchy and less likely to have moved down than men with less education.⁵ It would thus appear that at least some of whatever labor market disadvantage attaches to middle age will be reduced in the future as the educational attainment of men in this age category increases.

Certain types of training outside the formal educational system also appear to have a favorable influence on the earning power of middle-aged men. To be sure, the association is much clearer in the case of training that had been obtained prior to the beginning of the study than that which occurred during middle age.⁶ Moreover, longitudinal analysis of the relative earnings of trainees both before and after training has produced intriguing evidence that training is a highly selective process, and that cross-sectional relationships between training and labor market success must therefore be treated with some suspicion unless there are controls for personality variables as well as for such conventional human capital variables as education.⁷ Nevertheless, the conclusion that emerges from Chapter II is not that training is ineffective for middle-aged men, but rather that it cannot be assumed automatically to improve opportunities

³Tables 2A-13 and 2A-14, pp. 285-90.

⁴Tables 2A-13 and 2A-14, pp. 285-90.

⁵pp. 135, 137.

⁶pp. 62-73.

⁷p. 64.

for all persons in this age category under all circumstances. The objective should be to identify those groups for whom the payoff is likely to be greatest. While the work reported in this volume does not completely answer that question, it does point to at least one such category--namely black men with some prior training experience.⁸

While the inverse association between age and various manifestations of labor mobility is well known, the present volume attests to a not inconsequential amount of movement among middle-aged men. Over one-eighth of the members of the sample had made at least one voluntary change of employer during the five-year period covered by the study, and an additional one-twelfth had moved involuntarily.⁹ Moreover, about a third of the group had changed occupations during the period--one-fourth across the boundaries of major occupation groups.¹⁰ Even if some of the latter movement is spurious, as we suspect, there is clearly a substantial amount of change.

The mobility that takes place is, by and large, advantageous. Occupationally, more men moved up than down.¹¹ The voluntary interfirm movement that occurred led, on average, to higher levels of job satisfaction and, generally speaking, to economic gains as well.¹² The beneficent nature of the mobility that occurs, together with evidence that even larger proportions of middle-aged men are willing to change jobs if attractive opportunities present themselves,¹³ suggest the importance of measures designed to enhance the amount of labor market information available to them and of continued diligence in combating hiring specifications based exclusively on age. The same line of reasoning points to the desirability of examining other mobility-inhibiting practices to see whether they can be altered so as to minimize their undesirable effects. In this connection, we have produced some evidence that private pension plans as they have existed in the recent past have tended to inhibit both the propensity to make voluntary job changes and the probability of actual changes--at least among middle-aged men.¹⁴ This suggests that recent legislation requiring greater vesting of pension rights is justified not only on the basis of equity considerations, but also as a means of making the labor market more competitive and more effective in serving the needs of middle-aged workers.

⁸ p. 73.

⁹ p. 111.

¹⁰ p. 120.

¹¹ p. 146.

¹² pp. 104-111.

¹³ p. 81.

¹⁴ pp. 86, 95-98.

Early retirement--i.e., before age 65--is a phenomenon that has assumed increasing importance in recent years. On the basis of evidence adduced in Chapter V there is every reason to believe that it will become even more common in the future,¹⁵ for there appear to be many men in their fifties and early sixties who look favorably upon the prospect of retirement. The intention to retire early, which characterizes about two-fifths of the total group of men between fifty and sixty, is especially prevalent among those who can look forward to liberal retirement benefits, those with relatively unfavorable attitudes toward their jobs or toward work in general, and those without dependents.¹⁶

The very substantial importance of expected retirement income in this context suggests that policy-makers have a rather unambiguous and powerful tool at their disposal for affecting the labor force participation of men in their fifties and early sixties. Continued liberalization of public and private programs of early retirement benefits can be expected with a high degree of confidence to result in a continuation of the downward trend in participation rates for men fifty-five to sixty-four that has characterized the past decade. There are doubtless good arguments both for and against the economic desirability of such a trend, but this is not the place to elaborate them. However, it may be suggested that if society opts for facilitating the early retirement of increasing proportions of men, some attention needs to be paid to developing institutional arrangements for assuring diverse opportunities for the constructive use of leisure time.

On the other hand, it is clear that a substantial number of early retirements are not planned or intended, but are rather attributable to disabilities that result either from traumatic illness or injury or from a gradual deterioration in health. In many of these cases the policy prescription is for more liberal levels of support, for the evidence indicates that some such early "retirees" currently have woefully inadequate incomes and meager asset holdings.¹⁷

One of the contributions of the studies in this volume has been the clear evidence they have provided of the importance of attitudes in conditioning labor market behavior. The fact that attitudes measured at one point in time have been related to subsequent behavior and experience has removed the ambiguities relating to direction of causation that generally plague cross-sectional research designs on issues of this kind. To illustrate, the degree of job satisfaction expressed by the middle-aged worker when the study commenced in 1966 has been found to be related both

¹⁵p. 162.

¹⁶pp. 162-169.

¹⁷pp. 187-190.

to the probability of a voluntary change of employer¹⁸ and to the probability of retirement over the ensuing five years.¹⁹ Similarly, workers expressing relatively unfavorable reactions to their 1966 occupational assignments manifested an above-average tendency to have left them by 1971.²⁰ Strength of commitment to the work ethic as measured in 1966 has been shown to bear an inverse relationship to the probability of retirement.²¹

The analysis in Chapter VI has demonstrated that men who perceive that individual initiative makes a difference tend to have better and higher paying jobs than those who perceive that what happens to them is largely beyond their control--even when other relevant factors are held constant.²² But the analysis also suggests that these perceptions are not immutable personality characteristics--even among men in middle age--but are themselves influenced by labor market experience. For example, men with favorable labor market experience between 1969 and 1971 tended to become more "internal" over the same period.²³ The implications of these findings for manpower policy are clear. While the findings support the desirability of attempting to improve the motivation of disadvantaged middle-aged men, they also indicate that this is likely to be futile unless efforts are made concurrently to modify the opportunity structure so as to allow initiative to be rewarded. Because individual motivation and environmental influences are interacting, a sound program of intervention requires addressing both sets of factors simultaneously.²⁴

Considerable attention has been paid in all of the studies to differences in the labor market position of black and white middle-aged men. The substantial disparity that has been found between the two races in most measures of labor market success--e.g., earnings, occupational status, and unemployment experience--hardly comes as a surprise, for these differences have been well known and would be expected on the basis of racial differentials in educational attainment alone. However, there is evidence that the differentials in rewards between blacks and whites are greater than what can be accounted for by racial differentials in human

¹⁸p. 95.

¹⁹p. 175.

²⁰pp. 135, 137.

²¹p. 175.

²²p. 211.

²³p. 218

²⁴I am indebted to Gerald Gurin for this interpretation.

capital. Although none of the studies has been aimed specifically at measuring or indeed even of identifying racial discrimination in the labor market, several have adduced evidence of it, if any additional evidence is needed. For example, the relation between educational attainment and earnings is less systematic for middle-aged blacks than for their white counterparts.²⁵ Similarly, there is evidence that black men in this age group do not reap the same returns to initiative as do whites.²⁶ Finally, for given qualifications, black men were less likely than whites to move up the occupational ladder within firms over the five-year period covered by the study.²⁷

Nevertheless, the data also provide some grounds for limited optimism on this score, for they suggest that during the five years covered by the study at least some of the gross differentials between whites and blacks narrowed. For instance, among men who were employed at the survey dates in both years, hourly earnings rose more in percentage terms for blacks than for whites between 1967 and 1971, thus reducing the relative differential, and this trend was even more pronounced in the case of annual earnings.²⁸ Irrespective of employment status, the ratio of black-to-white average family income was higher in 1971 than in 1966.²⁹ With respect to occupational distribution, although there was no perceptible change in relative positions of blacks and whites over the five-year period, it can at least be said that the trend of growing racial disparity in occupational status that had characterized the work careers of the sample up to 1966 was apparently halted.³⁰ Although the causes of these modest improvements cannot be stated with confidence, it seems likely that the Civil Rights movement played at least some role.

While racial differences invite attention, the respects in which the labor market behaviors of black and white men are similar also deserve emphasis. There is no evidence, for instance, that black men differ from whites in the strength of their attachments to their current employers. Moreover, the factors that influence the strength of these attachments appear, by and large, to be the same and to operate in similar ways for blacks and whites.³¹ Nor are the probabilities of voluntary interfirm job changes different for blacks and whites. Other things equal, black

²⁵ Tables 2A-13 and 2A-14, pp. 285-90.

²⁶ pp. 212-213.

²⁷ p. 142.

²⁸ pp. 20-22.

²⁹ p. 262.

³⁰ p. 119.

³¹ pp. 86-89.

and white men are equally likely to make such changes and tend to respond to opportunities in substantially the same way.³²

In this same context, it is interesting that the fairly substantial difference that exists between the labor force participation rates of white and black men in their late fifties and early sixties are not presaged by their retirement expectations. Controlling for other factors, black men in their fifties are no more likely than whites to expect to retire prior to age 65.³³ Moreover, among the total sample of men who were not yet retired at the inception of the study, there was no racial difference in the likelihood of retirement by 1971.³⁴

One final point deserves emphasis. Some of the preceding chapters contain evidence of the adverse effect of the worsening economic conditions between 1969 and 1971 on the labor market experience of middle-aged men. For example, most of the widening in the differential between the labor force participation rates of blacks and whites that occurred during the five years covered by the study developed between 1969 and 1971, suggesting that the loosening of the labor market in that two-year period had a differentially adverse effect on blacks. The trend of unemployment rates for whites and blacks over the period tell pretty much the same story.³⁵ As another illustration, virtually all of the gain in real annual earnings between 1965 and 1970 occurred during the first three years of the period.³⁶ Finally, there is evidence that both the propensity of men to change jobs and the rate of actual voluntary movement are sensitive to the level of economic activity;³⁷ moreover, the likelihood that voluntary movement will produce a relative wage advantage is greater in a buoyant than in a depressed economy.³⁸ None of these findings, of course, is surprising, for they are all consistent with what is known about the operation of the labor market in general. However, they underscore the importance--particularly for those among middle-aged men who are inclined to suffer labor market disadvantage--of policies directed at achieving high levels of employment. If, as has been suggested, improved health is an important long-run policy measure for minimizing labor market disadvantage of the middle aged, an extremely important short-run policy would seem to be the maintenance of high levels of aggregate demand for labor.

³² pp. 89-103.

³³ p. 163.

³⁴ p. 172.

³⁵ pp. 13-15.

³⁶ p. 22.

³⁷ pp. 89, 99-103.

³⁸ p. 107.

APPENDIX A

SUPPLEMENTARY TABLES

Tables in this Appendix have been cited at relevant points in the text. The initial number of each table indicates the chapter to which it relates.

In these and all other tables in this volume, counts of individuals are shown in terms of number of sample cases rather than weighted population estimates. However, all calculations (percentages, means, regressions) are based on weighted observations.

In all percentage distributions except those relating to Chapter II, cases for which no information was obtained are excluded from the totals. Percentage distributions may not add up to 100 percent because of rounding. However, where numbers of sample cases do not add to their indicated totals, the difference is attributable (unless otherwise noted) to cases for which no information was obtained and/or to rounding.

Table 1A-1 Noninterview Rate, 1971 Survey, by Reason and by Selected Characteristics of Respondents in 1966

Characteristic, 1966	Number of respondents, 1966	Number deceased, 1966-1971	Number of men potentially eligible for interview, 1971	Noninterview rate, 1971		
				Refusal	Unable to locate ^a	Total
All respondents ^b	5,020	399	4,621	6.6	3.1	9.7
Whites	3,518	243	3,275	7.6	2.2	9.8
Blacks	1,420	148	1,272	3.8	5.1	8.9
55-59 years of age ^b	1,461	186	1,275	6.0	3.1	9.1
Whites	1,006	119	887	7.1	2.4	9.5
Blacks	420	60	360	3.6	4.4	8.0
Nonmarried ^b	648	79	569	5.3	7.0	12.3
Whites	345	41	304	6.9	6.2	13.1
Blacks	286	34	252	3.2	7.9	11.1
Less than 12 years of school completed ^b	3,229	292	2,937	5.8	3.0	8.8
Whites	1,983	154	1,829	6.9	2.0	8.9
Blacks	1,191	130	1,061	3.5	4.6	8.1
13 or more years of school completed ^b	729	42	687	8.9	2.8	11.7
Whites	641	34	607	9.6	2.3	11.9
Blacks	74	8	66	3.0	7.6	10.6
Out of labor force survey week ^b	347	96	251	4.4	5.6	10.0
Whites	197	47	150	5.3	5.3	10.6
Blacks	141	45	96	3.1	5.2	8.3
Employed in agriculture ^b	530	42	488	2.5	2.5	5.0
Whites	347	19	328	2.7	1.5	4.2
Blacks	172	22	150	2.0	4.7	6.7
Employed in construction ^b	578	61	517	7.7	5.4	13.1
Whites	388	45	343	9.3	3.2	12.5
Blacks	184	16	168	3.6	10.1	13.7
White collar workers ^b	1,497	103	1,394	8.5	2.8	11.3
Whites	1,310	88	1,222	8.5	2.5	11.0
Blacks	160	14	146	6.8	5.5	12.3
Blue collar workers ^b	2,604	206	2,398	6.4	3.0	9.4
Whites	1,682	121	1,561	7.9	1.9	9.8
Blacks	897	84	813	3.4	4.9	8.3
Total family income, 1965						
Under \$10,000 ^b	2,749	251	2,498	5.1	3.0	8.1
Whites	1,678	136	1,542	6.2	1.6	7.8
Blacks	1,027	108	919	3.2	5.1	8.3
\$10,000 or more ^b	1,215	71	1,144	6.4	2.3	8.7
Whites	1,090	64	1,026	6.4	2.2	8.6
Blacks	110	7	103	3.9	2.9	6.8
Home renters ^b	1,601	167	1,434	4.5	6.5	11.0
Whites	834	68	766	6.1	5.1	11.2
Blacks	722	93	629	2.7	8.1	10.8

a Includes a small number of cases in which the respondent was inaccessible to the interviewer even though his location was ascertained.

b Includes a small number of nonwhites other than Negroes.

Table 1A-2 Respondents' Perception of Progress during Past Five Years, by Age, Occupation, and Race^a
(Percentage distributions)

Age and occupation	Number of respondents	Total percent	"Progressed"	"Held own"	"Moved backward"
WHITES					
All respondents	2,953	100	49	42	8
Age					
50-54	1,126	100	52	39	8
55-59	1,024	100	48	45	7
60-64	803	100	45	44	10
Occupation in 1966					
White collar	1,087	100	60	33	7
Professional	295	100	68	26	6
Managers	496	100	59	34	8
Clerical	146	100	55	40	5
Sales	150	100	55	35	10
Blue collar	1,409	100	42	49	9
Craftsmen	734	100	46	46	8
Operatives	535	100	39	53	8
Laborers	140	100	34	50	16
Service	154	100	50	41	9
Farmers	236	100	40	50	10
Farm laborers	58	100	25	56	20
BLACKS					
All respondents	1,159	100	38	54	8
Age					
50-54	411	100	41	51	8
55-59	417	100	36	55	9
60-64	331	100	36	56	8
Occupation in 1966					
White collar	128	100	57	35	7
Professional	33	100	79	15	6
Managers	37	100	49	38	12
Clerical	51	100	53	43	4
Sales	7	b	b	b	b
Blue collar	745	100	37	54	10
Craftsmen	162	100	45	46	9
Operatives	333	100	36	56	7
Laborers	250	100	33	54	13
Service	152	100	40	54	6
Farmers	56	100	10	82	8
Farm laborers	73	100	22	71	7

a Based on response to the question "All in all, as far as your work is concerned, would you say that you've progressed during the past five years, moved backward, or just about held your own?" Respondents who answered "retired" have been removed from the base in calculating percentage distributions.

b Percentage not shown where base is fewer than 25 sample cases.

Table 1A-3 Principal Aspect of Progress or Retrogression Reported
by Respondents, by Race, 1971^a

(Percentage distributions)

Aspect of change	WHITES	BLACKS
Total number reporting "progressed"	1,339	380
Total percent	<u>100</u>	<u>100</u>
Wages or financial improvement	43	49
Responsibility, status, achievement	26	18
Knowledge or skills	15	13
Better job, type of work	6	6
Other	9	15
Total number reporting "moved backward"	229	95
Total percent	<u>100</u>	<u>100</u>
Less income	37	20
Health, physical condition, age	29	46
Unemployment, unsteady work	16	25
Less responsibility; less desirable work	12	2
Other	6	8

- a Respondents who reported they had "progressed" or "moved backward" over the five-year period were asked in what way(s) they had progressed or moved backward. Tabulation is based on first response of each respondent.

Table 1A-4 Number of Dependents^a Reported in 1966 and 1971, by Age and Race^b
(Percentage distributions)

Age	Number of respondents	1966					1971						
		Total percent	None	1	2	3	4 or more	Total percent	None	1	2	3	4 or more
WHITES													
Total or average	2,923	100	6	35	23	17	18	100	8	52	19	12	9
50-54	1,113	100	6	20	22	22	31	100	8	37	21	19	16
55-59	1,016	100	6	36	26	18	14	100	8	57	20	10	6
60-64	794	100	8	54	21	10	7	100	11	68	13	5	3
BLACKS													
Total or average	1,134	100	11	28	20	13	28	100	17	37	18	11	17
50-54	407	100	7	21	22	13	37	100	16	25	17	16	26
55-59	407	100	13	29	20	14	26	100	17	40	20	9	14
60-64	320	100	14	38	18	12	18	100	17	51	16	7	10

^a Includes wife, if married.

^b In Tables 1A-4 to 1A-22 the universe is restricted to those respondents who were interviewed in each time period and who provided information on the subject under consideration. Thus, precisely the same individuals are represented for each time period.

Table 1A-5 Proportion of Respondents with Health Problems, by Age and Race: 1966, 1969, 1971^a

Age	Number of respondents	1966	1969	1971
WHITES				
Total or average	2,894	25	30	29
50-54	1,099	21	23	24
55-59	1,004	25	29	27
60-64	791	31	40	39
BLACKS				
Total or average	1,126	25	28	30
50-54	401	21	22	22
55-59	406	24	28	27
60-64	319	32	37	43

a See Table 1A-4 , footnote b.

Table 1A-6 Comparative Health Condition, 1966 and 1971, by Age and Race^a
(Percentage distributions)

Age	Number of respondents	Total percent	No health problem either year	Health problem 1966, none 1971	Health problem 1971, none 1966	Health problem both years
WHITES						
Total or average	2,936	100	62	9	12	16
50-54	1,120	100	68	8	11	12
55-59	1,018	100	63	10	11	16
60-64	798	100	54	8	16	23
BLACKS						
Total or average	1,150	100	62	8	14	16
50-54	410	100	70	8	9	13
55-59	413	100	63	9	13	15
60-64	327	100	49	8	20	23

a See Table 1A-4 , footnote b.

Table 1A-7 Labor Force Participation and Unemployment Rates, Survey Weeks 1966-1971, by Age and Race^a

Age	1966				1967				1969				1971	
	Number of respondents	Labor force participation rate	Unemployment rate	Labor force participation rate	Unemployment rate	Labor force participation rate	Unemployment rate	Labor force participation rate	Unemployment rate	Labor force participation rate	Unemployment rate	Labor force participation rate	Unemployment rate	
WHITES														
Total or average	2,880	95.3	1.4	94.9	1.2	91.8	1.2	86.6	1.7					
50-54	1,091	97.0	1.3	96.7	1.2	95.8	1.1	94.1	0.8					
55-59	999	95.8	1.3	95.4	0.8	93.4	1.6	89.5	1.6					
60-64	790	92.3	1.7	91.8	1.8	84.6	1.0	73.0	3.3					
BLACKS														
Total or average	1,106	93.5	1.4	91.5	2.0	90.0	1.6	83.0	3.3					
50-54	391	94.8	1.7	92.8	2.3	91.8	1.8	90.4	3.0					
55-59	398	95.2	0.6	93.7	1.2	93.0	1.5	86.2	2.3					
60-64	317	89.5	1.7	86.6	2.6	83.6	1.3	68.6	6.0					

a See Table 1A-4, footnote b.

Table 1A-8 Labor Force Participation Rates of Respondents with No Health Problems,^a Survey Weeks 1966-1971, by Age and Race^b

Age	Number of respondents	Labor force participation rate			
		1966	1967	1969	1971
Total or average 50-54 55-59 60-64	WHITES				
	1,592	99.5	99.3	98.7	96.2
	675	99.6	99.5	99.3	98.9
	560	99.7	99.1	98.8	97.8
	357	99.2	99.2	97.5	89.1
	BLACKS				
	610	99.7	99.9	99.9	97.0
	254	99.6	99.7	100.0	100.0
	221	99.6	100.0	100.0	98.5
	135	100.0	100.0	99.4	88.0

a Excludes respondents who reported health problems in any survey year.

b See Table 1A-4, footnote b.

Table 1A-9 Labor Force and Employment Status in Survey Week 1971, by Labor Force and Employment Status in Survey Week 1966 and Race^a

(Percentage distributions)

Status in 1966	Number of respondents	Vertical percentage distribution	Labor force and employment status in 1971				
			Total percent	Employed	Unemployed	Out of labor force	
	WHITES						
	Total or average	2,953	100	100	85	1	14
	Employed	2,781	94	100	89	1	10
	Unemployed	38	1	100	63	2	35
	Out of labor force	134	4	100	20	2	78
	BLACKS						
	Total or average	1,159	100	100	80	3	18
	Employed	1,049	91	100	85	3	12
	Unemployed	22	2	100	68	8	24
	Out of labor force	88	8	100	10	0	90

a See Table 1A-4, footnote b.

Table 1A-10 Number of Weeks Unemployed in Period between 1969 and 1971
Surveys, by Number of Weeks Unemployed in Calendar Year 1965
and Race^a

(Percentage distributions)

Number of weeks unemployed in 1965	Number of respondents	Vertical percentage distribution	Number of weeks unemployed 1969-1971						
			Total percent	None	1-4	5-14	15-25	26+	
	WHITES								
	Total or average	2,881	100	100	91	2	3	2	3
	None	2,628	91	100	93	2	2	1	2
	1-4	74	3	100	71	3	11	4	12
	5-14	91	3	100	70	5	5	7	13
	15 or more	88	3	100	67	6	4	6	16
	BLACKS								
	Total or average	1,120	100	100	89	3	3	2	3
	None	941	84	100	92	2	3	2	2
	1-4	47	4	100	84	8	4	4	0
5-14	71	6	100	74	10	8	4	5	
15 or more	61	6	100	61	7	9	7	15	

a See Table 1A-4, footnote b.

Table 1A-11 Number of Weeks Out of Labor Force in Period between 1969 and 1971 Surveys, by Number of Weeks Out of Labor Force in Calendar Year 1965 and Race^a

(Percentage distributions)

Number of weeks out of labor force, 1965	Number of respondents	Vertical percentage distribution	Number of weeks out of labor force, 1969-1971					
			Total percent	None	1-9	10-51	52-95	96 or more
Total or average None 1-4 5-25 26-51 52	WHITES							
	2,878	100	100	70	12	7	3	8
	2,410	84	100	74	12	6	3	5
	172	6	100	67	16	9	4	4
	142	5	100	49	15	16	6	14
	66	2	100	30	12	12	11	36
	88	3	100	10	0	4	7	80
	BLACKS							
	1,110	100	100	64	11	10	4	10
	860	79	100	71	12	9	4	4
	66	5	100	68	13	9	1	8
	81	6	100	48	9	25	14	5
	38	3	100	17	12	14	13	43
	65	6	100	7	2	1	2	88

a See Table 1A-4, footnote b.

Table 1A-12 Mean Number of Hours Worked in Survey Weeks, 1966-1971,
by Age and Race: Employed Respondents^a

Age	Number of respondents	1966	1967	1969	1971
WHITES					
Total or average	1,766	48.9	48.2	47.2	46.4
50-54	737	49.0	48.3	47.7	47.3
55-59	639	48.2	48.0	46.6	45.7
60-64	390	49.9	48.4	47.4	45.7
BLACKS					
Total or average	603	43.5	43.4	42.9	42.9
50-54	229	44.0	43.4	43.8	42.4
55-59	231	42.8	43.0	41.3	42.8
60-64	143	44.0	44.2	43.8	43.7

a See Table 1A-4, footnote b.

Table 1A-13 Class of Worker in 1971 Survey Week, by Class of Worker in 1966 Survey Week and Race:
Employed Respondents^a

(Percentage distributions)

Class of worker in 1966	Number of respondents	Vertical percentage distribution	Class of worker in 1971			
			Total percent	Private wage and salary	Government	Self employed ^b
WHITES						
Total or average	2,470	100	100	64	16	20
Private wage and salary	1,598	65	100	92	4	5
Government	333	13	100	8	89	3
Self-employed	538	22	100	18	4	78
BLACKS						
Total or average	876	100	100	69	21	10
Private wage and salary	609	70	100	93	4	3
Government	169	19	100	14	86	0
Self-employed	98	11	100	15	7	78

^a See Table 1A-4, footnote b.

^b Includes two white respondents who were unpaid family workers.

Table 1A-14 Real Average Hourly Earnings in August 1971 Dollars,^a by Age and Race, 1966-1971^b

Age	Number of respondents	1966	1967	1969	1971	Percent increase 1966-1971
WHITES						
Total or average	1,408	\$4.33	\$4.46	\$4.65	\$4.80	11
50-54	628	4.46	4.61	4.83	4.96	11
55-59	513	4.26	4.36	4.55	4.75	12
60-64	267	4.21	4.29	4.39	4.55	8
BLACKS						
Total or average	542	2.90	2.99	3.11	3.26	12
50-54	225	3.00	3.14	3.25	3.43	14
55-59	216	2.87	2.93	3.08	3.19	11
60-64	101	2.71	2.78	2.88	3.02	11

a Adjustments are based on the Consumer Price Index for the month of June in 1966 and 1967 and for August in 1969 and 1971. These were the months in which most respondents were interviewed in the respective years.

b See Table 1A-4, footnote b.

Table 1A-15 Mean Real Annual Earnings in 1970 Dollars^a by Age and Race,
1965-1970: Employed Wage and Salary Workers^b

Age	Number of respondents	1965	1966	1968	1970	Percent change 1965-1970
WHITES						
Total or average	1,588	\$9,734	\$9,866	\$10,371	\$10,439	7
50-54	702	10,133	10,270	10,916	10,973	8
55-59	571	9,534	9,763	10,160	10,446	10
60-64	315	9,225	9,187	9,569	9,291	1
BLACKS						
Total or average	648	5,863	6,069	6,431	6,508	11
50-54	264	6,367	6,573	7,127	7,131	12
55-59	251	5,647	5,737	6,078	6,229	10
60-64	133	5,222	5,647	5,640	5,729	10

a Data for years prior to 1970 are adjusted on the basis of the Consumer Price Index to reflect the purchasing power of the dollar in 1970.

b See Table 1A-4, footnote b.

Table 1A-16 Degree of Job Satisfaction 1966, 1969, and 1971, by Age and Race: Employed Respondents^a

(Percentage distributions)

Age	Number of respondents	1966				1969				1971			
		Total percent	Like job very much	Like job somewhat	Dislike job	Total percent	Like job very much	Like job somewhat	Dislike job	Total percent	Like job very much	Like job somewhat	Dislike job
WHITES													
Total or average	2,330	100	59	35	6	100	55	39	6	100	47	45	8
50-54	974	100	56	37	7	100	54	39	7	100	46	45	9
55-59	837	100	56	37	7	100	52	42	6	100	47	46	7
60-64	519	100	68	28	4	100	62	34	4	100	51	44	5
BLACKS													
Total or average	807	100	54	39	7	100	54	42	5	100	50	46	4
50-54	313	100	51	43	6	100	50	46	4	100	48	48	4
55-59	312	100	57	36	7	100	57	38	5	100	49	46	5
60-64	182	100	54	37	9	100	54	40	5	100	58	39	4

^a See Table 1A-4, footnote b.

Table 1A-18 Mean Real Per Capita Family Income in 1970 Dollars,^a by Marital Status, Age, and Race, 1965 and 1970^b

Age	Married, spouse present ^c				Other		
	Number of respondents	Per capita family income in 1970 dollars		Percent change, 1965-1970	Number of respondents	Per capita family income in 1970 dollars	
		1965	1970			1965	Percent change, 1965-1970
	WHITES						
Total or average	1,470	3,607	4,920	36	240	4,236	22
50-54	583	3,156	4,726	50	84	4,644	24
55-59	526	3,693	5,128	39	80	3,628	47
60-64	361	4,181	4,931	18	76	4,454	0
	BLACKS						
Total or average	439	1,956	2,492	27	184	2,550	53
50-54	166	1,762	2,416	37	62	2,738	49
55-59	158	2,091	2,651	27	71	2,855	52
60-64	115	2,065	2,377	15	51	1,867	62

^a Data for 1965 are adjusted on the basis of the Consumer Price Index to reflect the purchasing power of the dollar in 1970.

^b See Table 1A-4, footnote b.

^c Refers to men who were married and living with their wives in both years.

Table 1A-19 Per Capita Family Income in 1965 (in 1970 Dollars),^a by Per Capita Family Income in 1970, Age, and Race: Married Respondents^b

(Percentage distributions)

Age and per capita family income in 1965 (1970 dollars)	Number of respondents	Total percent	Less than \$2,000	\$2,000-\$2,999	\$3,000-\$3,999	\$4,000-\$4,999	\$5,000-\$5,999	\$6,000-\$7,999	\$8,000 or more
WHITES									
All ages									
Under \$2,000	365	100	50	30	11	4	3	1	1
\$2,000-\$2,999	337	100	10	24	31	19	8	7	2
\$3,000-\$3,999	296	100	5	12	23	24	17	13	6
\$4,000-\$4,999	211	100	4	6	10	24	26	15	15
\$5,000-\$5,999	150	100	3	4	10	15	22	32	14
\$6,000-\$7,999	131	100	4	1	4	8	6	44	33
\$8,000 or more	138	100	2	1	6	4	4	18	65
Age 60-64									
Under \$2,000	85	100	62	21	10	4	1	1	1
\$2,000-\$2,999	65	100	15	29	32	12	6	3	2
\$3,000-\$3,999	65	100	15	6	25	28	17	4	4
\$4,000-\$4,999	57	100	5	10	11	30	17	14	12
\$5,000-\$5,999	44	100	5	12	14	11	18	27	14
\$6,000-\$7,999	40	100	10	0	5	15	12	40	18
\$8,000 or more	55	100	2	0	9	4	2	20	65
BLACKS									
All ages									
Under \$2,000	290	100	68	24	5	2	1	0	0
\$2,000-\$2,999	83	100	23	31	26	10	5	3	1
\$3,000-\$3,999	57	100	4	21	23	31	14	7	0
\$4,000-\$4,999	34	100	17	22	22	11	16	10	2
\$5,000 or more	43	100	9	2	6	26	2	21	34
Age 60-64									
Under \$2,000	75	100	79	12	6	2	0	0	0
\$2,000-\$2,999	25	100	27	33	19	11	3	7	0
\$3,000-\$3,999	13	c	c	c	c	c	c	c	c
\$4,000-\$4,999	15	c	c	c	c	c	c	c	c
\$5,000 or more	12	c	c	c	c	c	c	c	c

- a Data for 1965 are adjusted on the basis of the Consumer Price Index to reflect the purchasing power of the dollar in 1970.
- b Table includes only respondents who were married and living with their wives in both years. See Table 1A-4, footnote b.
- c Percentage not calculated when based on fewer than 25 sample cases.

Table 1A-20 Mean Real Net Family Assets in 1971 Dollars^a by Marital Status, Age, and Race, 1966 and 1971^b

Age	Married, spouse present ^c				Other			
	Number of respondents	Net family assets in 1971 dollars		Percent change, 1966-1971	Number of respondents	Net family assets in 1971 dollars		Percent change, 1966-1971
		1966	1971			1966	1971	
WHITES								
Total or average	1,333	34,086	43,015	26	210	16,280	18,200	12
50-54	545	26,185	36,880	41	70	14,046	16,118	15
55-59	468	33,648	44,778	33	76	18,011	19,308	7
60-64	320	47,644	50,581	6	64	16,463	18,987	15
BLACKS								
Total or average	499	6,568	9,082	38	206	2,200	3,654	66
50-54	172	6,886	9,502	38	71	2,250	3,366	50
55-59	185	6,417	7,800	22	75	2,009	4,290	114
60-64	142	6,355	10,389	63	60	2,391	3,191	33

^a Data for 1966 are adjusted on the basis of the Consumer Price Index to reflect the purchasing power of the dollar in 1971. Net value of automobile(s) is included in 1971, but not in 1966.

^b See Table 1A-4, footnote b.

^c Refers to men who were married and living with their wives in both years.

Table 1A-21 Mean Real Per Capita Family Assets in 1971 Dollars^a by Marital Status, Age, and Race^b

Age	Married, spouse present ^c				Other			
	Number of respondents	Per capita assets		Percent change, 1966-1971	Number of respondents	Per capita assets		Percent change, 1966-1971
		1966	1971			1966	1971	
WHITES								
Total or average	1,471	\$10,305	\$16,718	62	240	\$8,787	\$12,591	43
50-54	610	6,282	12,655	101	78	7,099	10,070	42
55-59	503	9,918	17,426	76	86	8,387	12,991	55
60-64	358	17,468	22,458	29	76	10,869	14,553	34
BLACKS								
Total or average	538	1,963	3,356	71	229	971	2,496	157
50-54	185	1,719	2,925	70	77	924	2,074	124
55-59	201	1,990	3,080	55	84	989	2,547	158
60-64	152	2,250	4,343	93	68	1,007	2,967	195

^a Data for 1966 are adjusted on the basis of the Consumer Price Index to reflect the purchasing power of the dollar in 1971. Net value of automobile(s) is included in 1971, but not in 1966.

^b See Table 1A-4, footnote b.

^c Refers to men who were married and living with their wives in both years.

Table 1A-22 Per Capita Family Net Assets in 1966 (in 1971 Dollars),^a by Per Capita Family Net Assets in 1971, Age, and Race: Married Respondents^b

(Percentage distributions)

Age and per capita family net assets in 1966 (1971 dollars)	Number of respondents	Total percent	Less than \$1,000	\$1,000-\$4,999	\$5,000-\$9,999	\$10,000-\$14,999	\$15,000-\$19,999	\$20,000-\$24,999	\$25,000-\$49,999	\$50,000 or more
WHITES										
All ages										
Under \$1,000	290	100	48	43	7	1	0	0	1	0
\$1,000-\$4,999	508	100	5	44	36	10	4	1	1	0
\$5,000-\$9,999	294	100	1	8	32	33	12	6	6	1
\$10,000-\$14,999	143	100	2	4	10	25	26	15	13	6
\$15,000-\$19,999	82	100	1	0	8	14	17	24	27	9
\$20,000-\$24,999	45	100	0	2	4	4	15	15	58	2
\$25,000-\$49,999	106	100	1	3	1	6	8	10	51	20
\$50,000 or more	69	100	0	1	0	3	0	0	10	85
Age 60-64										
Under \$1,000	64	100	56	40	0	5	0	0	0	0
\$1,000-\$4,999	93	100	3	53	27	9	4	2	1	0
\$5,000-\$9,999	59	100	5	10	28	32	14	5	5	2
\$10,000-\$14,999	41	100	2	4	12	26	27	12	15	0
\$15,000-\$19,999	24	c	c	c	c	c	c	c	c	c
\$20,000-\$24,999	15	c	c	c	c	c	c	c	c	c
\$25,000-\$49,999	40	100	3	5	2	3	7	13	52	15
\$50,000 or more	35	100	0	3	0	2	0	0	8	86
BLACKS										
All ages										
Under \$1,000	311	100	69	26	4	1	0	0	0	0
\$1,000-\$4,999	189	100	12	59	25	3	0	0	0	0
\$5,000-\$9,999	48	100	8	24	52	16	0	0	0	0
\$10,000-\$14,999	12	c	c	c	c	c	c	c	c	c
\$15,000 or more	8	c	c	c	c	c	c	c	c	c
Age 60-64										
Under \$1,000	85	100	70	25	4	1	0	0	0	0
\$1,000-\$4,999	51	100	10	58	28	3	0	0	0	0
\$5,000-\$9,999	17	c	c	c	c	c	c	c	c	c
\$10,000-\$14,999	3	c	c	c	c	c	c	c	c	c
\$15,000 or more	5	c	c	c	c	c	c	c	c	c

a Data for 1966 are adjusted on the basis of the Consumer Price Index to reflect the purchasing power of the dollar in 1971. Net value of automobile(s) is included in 1971, but not in 1966.

b Table includes only respondents who were married and living with their wives in both years. See Table 1A-4, footnote b.

c Percentage not calculated when based on fewer than 25 sample cases.

Table 2A-1 Proportion of Respondents Who Received Training Prior to 1966, by Race and Selected Characteristics^a

Characteristics	WHITES		BLACKS	
	Total number of respondents	Percent with training ^b	Total number of respondents	Percent with training ^b
<u>Total or average Highest year of school completed</u>	1,984	51	851	29
0-7	325	29	461	15
8	351	38	102	31
9-11	419	49	145	40
12	515	66	97	64
13 or more	370	63	43	42
<u>Age</u>				
50-54	802	58	316	42
55-59	686	45	318	23
60-64	496	48	217	17
<u>Occupation of current or last job, 1966</u>				
Professionals	220	69	25	58
Managers	266	62	11	c
Clerical workers	139	55	48	37
Sales workers	104	64	4	c
Craftsmen	551	56	120	46
Operatives	432	36	260	27
Nonfarm laborers	107	29	200	19
Service workers	116	42	120	29
Farm laborers	44	10	59	6

- a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.
- b Cases in which training status was not ascertained are included in the base.
- c Percent not shown where base represents fewer than 25 sample cases.

Table 2A-2 Institutional Source of Training Received by Respondents with Pre-1966 Training,
by Selected Characteristics and Race^a
(Percentage distributions)^b

Characteristics	Total number of respondents	Total percent ^b	Institutional source of training				Adult education
			Business college or technical institute	Company training school (6 weeks or more)	Armed forces	Formal on-the-job training, apprenticeship, MDTA, etc.	
WHITES							
Total or average	1,011	100	34	24	34	36	21
Highest year of school completed							
0-7	98	100	23	16	28	50	14
8	134	100	32	18	29	38	11
9-11	208	100	35	23	33	42	15
12	341	100	39	26	39	35	17
13 or more	229	100	31	26	34	27	41
Age							
50-54	466	100	30	24	48	35	19
55-59	313	100	39	21	29	38	23
60-64	232	100	36	26	15	37	23
Occupation of current or last job, 1966							
Professionals	150	100	34	27	34	25	42
Managers	163	100	39	25	34	35	27
Clerical workers	78	100	45	16	43	31	27
Sales workers	65	100	43	29	36	36	14
Craftsmen	309	100	32	25	30	44	13
Operatives	159	100	28	20	36	39	12
Nonfarm laborers	31	100	25	11	34	33	30
Service workers	50	100	26	17	41	35	10
Farm laborers	4	c	c	c	c	c	c

(Table continued on next page.)

Table 2A-2 Continued

Characteristics	Total number of respondents	Total percent ^b	Institutional source of training				Adult education
			Business college or technical institute	Company training school (6 weeks or more)	Armed forces	Formal on-the-job training, apprenticeship, MDTA, etc.	
BLACKS							
Total or average	235	100	29	15	32	38	22
Highest year of school completed							
0-7	64	100	14	8	28	43	19
8	31	100	12	22	41	38	19
9-11	57	100	33	8	28	42	27
12	62	100	44	18	38	28	16
13 or more	20	c	c	c	c	c	c
Age							
50-54	128	100	31	14	40	34	18
55-59	70	100	31	13	25	41	23
60-64	37	100	17	21	16	43	32
Occupation of current or last job, 1966							
Professionals ^a	15	c	c	c	c	c	c
Managers	9	c	c	c	c	c	c
Clerical workers	19	c	c	c	c	c	c
Sales workers	1	c	c	c	c	c	c
Craftsmen	53	100	28	21	34	43	10
Operatives	68	100	26	16	31	35	18
Nonfarm laborers	35	100	23	3	27	48	26
Service workers	31	100	29	10	34	32	26
Farm laborers	4	c	c	c	c	c	c

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

b Programs add to more than 100 percent because respondents may have participated in programs from more than one source.

c Percent not shown where base represents fewer than 25 sample cases.

Table 2A-3 Proportion of Respondents Who Received Occupational Training 1966-1971, by Whether Received Training Prior to 1966, Race, and Other Selected Characteristics^a

Characteristics	All respondents ^b		Respondents with some training prior to 1966		Respondents with no training prior to 1966	
	Total number	Percent with training ^c	Total number	Percent with training ^c	Total number	Percent with training ^c
WHITES						
<u>Total or average Highest year of school completed</u>	1,984	21	1,011	29	906	12
0-7	325	6	98	9	217	4
8	351	13	134	19	210	8
9-11	419	14	208	18	201	10
12	515	24	341	29	150	13
13 or more	370	45	229	50	125	34
<u>Age</u>						
50-54	802	28	466	34	306	16
55-59	686	18	313	27	350	9
60-64	496	15	232	19	250	11
<u>Occupation of current or last job, 1971</u>						
Professionals	222	6	144	48	68	39
Managers	289	29	172	35	102	20
Clerical workers	129	16	79	18	46	16
Sales workers	97	32	59	41	35	14
Craftsmen	561	20	314	26	223	11
Operatives	409	7	156	10	248	5
Nonfarm laborers	102	10	28	15	70	8
Service workers	123	18	46	35	77	8
Farm laborers	40	0	4	d	35	0

(Table continued on next page.)

Table 2A-3

Continued

Characteristics	All respondents ^b		Respondents with some training prior to 1966		Respondents with no training prior to 1966	
	Total number	Percent with training ^c	Total number	Percent with training ^c	Total number	Percent with training ^c
BLACKS						
<u>Total or average Highest year of school completed</u>	851	12	235	25	599	6
0-7	461	6	64	22	393	3
8	102	8	31	12	68	7
9-11	145	13	57	22	84	7
12	97	22	62	27	32	16
13 or more	43	47	20	d	22	d
<u>Age</u>						
50-54	316	16	128	27	179	9
55-59	318	9	70	21	245	5
60-64	217	8	37	25	175	4
<u>Occupation of current or last job, 1971</u>						
Professionals	29	53	19	d	9	d
Managers	18	d	13	d	5	d
Clerical workers	55	12	16	d	36	11
Sales workers	1	d	0	d	1	d
Craftsmen	133	19	49	33	81	11
Operatives	247	9	61	21	182	5
Nonfarm laborers	173	2	36	5	133	1
Service workers	138	14	36	34	101	6
Farm laborers	49	3	3	d	45	4

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

b Includes respondents for whom training status prior to 1966 was not ascertained.

c Cases in which training status was not ascertained are included in the base.

d Percent not shown where base represents fewer than 25 sample cases.

Table 2A-4 Proportion of Respondents Who Received Occupational Training 1966-1969 and 1969-1971, by Selected Characteristics and Race^a

Characteristics	WHITES			BLACKS		
	Total number of respondents	Percent with training ^b 1966-1969	Percent with training ^b 1969-1971	Total number of respondents	Percent with training ^b 1966-1969	Percent with training ^b 1969-1971
<u>Total or average Highest year of school completed</u>	1,984	19	13	851	9	7
0-7	325	4	3	161	6	3
8	351	10	8	102	4	6
9-11	419	12	8	145	9	7
12	515	24	15	97	15	12
13 or more	370	39	30	43	42	31
<u>Age</u>						
50-54	802	25	17	316	11	10
55-59	686	15	12	318	8	4
60-64	496	13	8	217	9	5
<u>Occupation of current or last job, 1971</u>						
Professionals	222	44	32	29	50	33
Managers	289	24	17	18	c	c
Clerical workers	179	16	10	55	14	7
Sales workers	97	34	16	1	c	c
Craftsmen	561	17	13	133	12	13
Operatives	409	6	4	247	7	3
Nonfarm laborers	102	6	5	173	3	1
Service workers	123	16	11	138	11	8
Farm laborers	40	0	0	49	0	3

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1968, and 1971 was as a wage or salary worker and who were in the labor force 35 weeks or more in the year prior to the 1966 survey.

b Cases in which training status was not ascertained are included in the base.

c Percent not shown where base represents fewer than 25 sample cases.

Table 2A-5

Institutional Source of Training Received by White^a Respondents Who Received Training between 1966 and 1971, by Time Training was Received and Selected Characteristics^b

(Percentage distributions)

Characteristics	Total number of respondents	Total percent	Institutional source					
			Business college or technical institute	Company school	Correspondence	General education	Other NA	
Training received 1966-1969								
Total or average	368	100	4	33	9	14	39	1
Highest year of school completed								
0-7	14	100	d	d	d	d	d	d
8	36	100	0	40	8	17	35	0
9-11	51	100	6	31	12	13	36	2
12	119	100	2	36	9	10	42	1
13 or more	147	100	5	31	7	16	39	2
Age								
50-54	198	100	5	35	8	13	38	1
55-59	106	100	1	30	11	16	41	1
60-64	64	100	5	24	6	12	43	0
Occupation of current or last job, 1969 ^c								
Professionals	95	100	5	24	7	18	44	2
Managers	73	100	6	24	8	8	53	1
Sales workers	32	100	0	47	20	12	21	0
Craftsmen	96	100	4	49	6	10	30	1

(Table continued on next page.)

Table 2A-5 Continued

Characteristics	Total number of respondents	Total percent	Institutional source				General education	Other NA
			Business college or technical institute	Company school	Correspondence			
Training received 1969-1971								
Total or average	259	100	3	44	7	5	41	0
Highest year of school completed								
0-7	10	100	d	d	d	d	d	d
8	28	100	7	45	7	11	30	0
9-11	33	100	0	57	3	9	31	0
12	76	100	4	53	6	4	33	0
13 or more	111	100	3	33	8	3	53	0
Age								
50-54	137	100	3	43	8	7	40	0
55-59	81	100	5	42	8	5	40	0
60-64	41	100	2	51	0	0	47	0
Occupation of current or last job, 1971c								
Professionals	73	100	0	34	9	3	54	0
Managers	49	100	2	48	4	4	36	0
Sales workers	16	100	d	d	d	d	d	d
Craftsmen	71	100	3	55	6	6	30	0

a Number of black men with training is too small to permit reliable estimates by characteristics. For total distribution of blacks, see Table 2A-6.

b Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

c Occupation groups not shown have fewer than 25 sample cases.

d Percent not shown where base represents fewer than 25 sample cases.

Table 2A-6 Institutional Source of Training Received by Black Respondents who Received Training between 1966 and 1971, by Time Training was Received^a

Institutional source	1966-1969	1969-1971
<u>Total or average</u>	78	54
<u>Total percent</u>	<u>100</u>	<u>100</u>
Business college or technical institute	1	4
Company school	34	31
Correspondence	3	4
General education	17	10
Other	40	51
NA	5	0

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

Table 2A-7
Selected Characteristics of Training Received by White^a Respondents between 1966 and 1969, by Selected Characteristics of Respondents^b

Characteristics	Total number of respondents	Completed program? (Percentage distribution)				Percent using training on current job ^c	Type of training (Percentage distribution)							
		Total	Yes	No	Still enrolled		NA	Total	Professional	Managerial	Clerical	Skilled manual	Other	NA
<u>Total or average Highest year of school completed</u>	368	100	79	3	12	6	57	38	22	2	17	20	0	
0-7	14	100	e	e	e	e	e	e	e	e	e	e	e	
8	36	100	66	3	28	3	61	27	20	0	39	14	0	
9-11	51	100	73	4	10	14	50	25	18	6	29	22	0	
12	119	100	76	2	15	7	57	35	18	4	19	23	1	
13 or more	147	100	84	3	8	4	59	49	27	1	6	17	1	
<u>Age</u>														
50-54	198	100	78	3	12	5	59	38	25	3	17	17	0	
55-59	106	100	75	2	15	7	63	37	20	0	18	25	1	
60-64	64	100	87	2	8	3	43	41	17	3	17	22	0	
<u>Occupation of current or last job, 1969^d</u>														
Professionals	95	100	85	1	9	5	58	56	23	0	0	19	2	
Managers	73	100	83	4	9	4	55	43	34	1	5	16	0	
Sales workers	32	100	65	3	23	9	62	47	13	16	3	21	0	
Craftsmen	96	100	79	3	13	5	60	20	23	1	44	12	0	

a Number of black men with training is too small to permit reliable estimates by characteristics. For total distribution of blacks see Table 2A-9.

b Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

c Cases in which information was not ascertainable are included in base.

d Occupation groups not shown have fewer than 25 sample cases.

Percent not shown where base represents fewer than 25 sample cases.

Table 2A-8 Selected Characteristics of Training Received by White^a Respondents between 1969 and 1971, by Selected Characteristics of Respondents^b

Characteristics	Total number of respondents	Completed program? (Percentage distribution)				Percent using training on current job ^c	Type of training (Percentage distribution)						
		Total	Yes	No	Still enrolled		NA	Total	Professional	Managerial	Clerical	Skilled manual	Other NA
<u>Total or average Highest year of school completed</u>	259	100	91	2	6	0	100	45	26	3	14	11	1
0-7	10	100	e	e	e	e	100	e	e	e	e	e	e
8	28	100	85	4	11	0	100	26	22	0	32	17	4
9-11	33	100	94	3	3	0	100	25	30	3	20	22	0
12	76	100	91	1	8	0	100	38	33	4	15	10	1
13 or more	111	100	92	2	6	0	100	62	24	3	7	6	1
<u>Age</u>													
50-54	137	100	93	1	6	0	100	45	28	3	11	11	2
55-59	81	100	88	3	10	0	100	45	27	3	15	10	0
60-64	41	100	93	5	2	0	100	44	19	5	18	14	0
<u>Occupation of current or last job, 1971^d</u>													
Professionals	73	100	92	1	7	0	100	72	19	3	1	5	0
Managers	49	100	90	2	8	0	100	40	48	2	0	8	2
Sales workers	16	100	e	e	e	e	100	e	e	e	e	e	e
Craftsmen	71	100	93	1	5	0	100	20	34	2	29	14	1

a Number of black men with training is too small to permit reliable estimates by characteristics. For total distribution of blacks see Table 2A-9.

b Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

c Cases in which information was not ascertained are included in base.

d Occupation groups not shown have fewer than 25 sample cases.

e Percent not shown where base represents fewer than 25 sample cases.

Table 2A-9 Selected Characteristics of Training Received by Black Respondents, by Period during which Training was Received^a

Characteristics	1966-1969	1969-1971
<u>Total number of respondents</u>	78	54
<u>Completed program</u>		
Total percent	100	100
Yes	65	77
No	4	0
Still attending	24	23
NA	7	0
<u>Percent using training on current job</u>	50	83
<u>Type of training</u>		
Total percent	100	100
Professional	25	32
Managerial	10	23
Clerical	1	1
Skilled manual	29	29
Other	34	14
NA	0	0

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

Table 2A-10 Proportion of Respondents with Definite and Conditional Plans for Future Occupational Training, by Training Experience 1966-1971, Race and Other Selected Characteristics^a

Characteristics	All respondents ^b			Respondents with no training 1966-1971			Respondents with training 1966-1971		
	Total number	Percent responding ^c		Total number	Percent responding ^c		Total number	Percent responding ^c	
		"Yes"	"Maybe"		"Yes"	"Maybe"		"Yes"	"Maybe"
	WHITES								
<u>Total or average</u>	1,984	7	3	1,516	2	1	416	22	7
<u>Highest year of school completed</u>									
0-7	325	0	1	301	0	1	20	d	d
8	351	4	2	300	1	1	45	21	5
9-11	419	5	1	345	2	1	61	22	3
12	515	8	4	375	3	3	124	18	7
13 or more	370	16	5	192	4	1	165	29	9
<u>Age</u>									
50-54	802	10	3	554	2	2	221	25	7
55-59	686	6	2	548	2	1	120	22	9
60-64	496	4	2	414	2	2	75	16	3
<u>Occupation of current or last job, 1971</u>									
Professionals	222	19	5	114	7	0	101	31	9
Managers	289	7	5	202	1	3	85	21	9
Clerical workers	129	4	1	103	1	0	20	d	d
Sales workers	97	9	2	59	3	2	32	18	3
Craftsmen	561	7	2	430	3	2	114	20	5
Operatives	409	2	2	373	1	1	29	12	7
Nonfarm laborers	102	2	1	92	1	1	10	d	d
Service workers	123	8	2	97	3	1	22	d	d
Farm laborers	40	0	0	40	0	0	0	--	--

(Table continued on next page.)

Table 2A-10

Continued

Characteristics	All respondents ^b			Respondents with no training 1966-1971			Respondents with training 1966-1971		
	Total number	Percent responding ^c		Total number	Percent responding ^c		Total number	Percent responding ^c	
		"Yes"	"Maybe"		"Yes"	"Maybe"		"Yes"	"Maybe"
	BLACKS								
<u>Total or average</u>	851	6	3	742	4	2	94	16	8
<u>Highest year of school completed</u>									
0-7	461	3	3	425	2	2	30	8	18
8	102	4	2	94	5	2	7	d	d
9-11	145	11	5	126	8	5	18	d	d
12	97	8	2	74	5	2	19	d	d
13 or more	43	16	3	22	17	0	19	d	d
<u>Age</u>									
50-54	316	7	4	259	4	4	49	18	5
55-59	318	7	1	284	6	1	31	17	5
60-64	217	3	3	199	2	2	14	d	d
<u>Occupation of current or last job, 1971</u>									
Professionals	29	6	6	14	d	d	13	d	d
Managers	18	d	d	13	d	d	4	d	d
Clerical workers	55	4	5	46	2	6	7	d	d
Sales workers	1	d	d	1	d	d	0	--	--
Craftsmen	133	6	1	105	5	1	24	d	d
Operatives	247	4	4	226	3	3	20	d	d
Nonfarm laborers	173	3	2	168	3	2	4	d	d
Service workers	138	14	3	114	10	2	20	d	d
Farm laborers	49	5	0	47	2	0	2	d	d

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

b Cases in which training experience 1966-1971 was not ascertained are included in the total.

c Cases in which plans were not ascertained are included in the base.

d Percent not shown where base represents fewer than 25 sample cases.

Table 2A-11 Regressions Relating Likelihood of Training Prior to 1966 to Selected Characteristics of Respondents by Race^a

(t-ratios)
(Coefficients shown in percentage points)

Characteristics	Probability of training prior to 1966	
	WHITES	BLACKS
Constant	11.0 (1.43)*	17.6 (2.93)***
<u>Highest year of school completed^b</u>		
9-11	10.5 (3.46)***	17.6 (4.47)***
12	25.0 (8.27)***	40.7 (8.72)***
13 or more	14.6 (3.79)***	9.2 (1.18)
<u>Age</u>		
55-59	-10.1 (- 4.01)***	-14.7 (- 4.52)***
60-64	- 6.8 (- 2.50)***	-17.5 (- 4.69)***
<u>Residence, 1966</u>		
Non-South	6.6 (2.65)***	7.5 (2.51)***
<u>Occupation of current or last job^b</u>		
Professionals	45.9 (5.35)***	40.6 (3.1)***
Managers	40.4 (4.90)***	43.9 (3.22)***
Clerical workers	29.7 (3.45)***	5.1 (0.58)
Sales workers	38.4 (4.32)***	11.5 (0.63)
Craftsmen	36.3 (4.68)***	25.3 (3.71)***
Operatives	18.0 (2.31)**	6.5 (1.04)
Nonfarm laborers	14.3 (1.64)*	3.5 (0.56)
Service workers	22.6 (2.62)***	9.2 (1.37)*
$\bar{R}^2$	.127	.215
F	18.39	15.30
Number of sample cases	1917	834

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker, and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.

b The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 2A-12 Regressions Relating Likelihood of Training 1966-1971
to Selected Characteristics of Respondents by Race^a

(t-ratios)

(Coefficients shown in percentage points)

Characteristics	Probability of training 1966-1971	
	WHITES	BLACKS
Constant	9.8 (1.57)*	3.5 (0.78)
<u>Highest year of school completed^b</u>		
9-11	1.6 (0.65)	3.5 (1.17)
12	7.5 (2.97)***	9.9 (2.71)***
13 or more	25.3 (7.93)***	31.6 (5.40)***
<u>Age</u>		
55-59	- 6.1 (- 2.94)***	- 3.7 (- 1.52)*
60-64	-10.8 (- 4.80)***	- 3.4 (- 1.20)
<u>Residence, 1966</u>		
Non-South	- 3.5 (- 1.70)**	- 3.2 (- 1.44)*
<u>Occupation of current or last job^b</u>		
Professionals	16.9 (2.40)***	15.5 (1.68)**
Managers	7.8 (1.16)	- 2.0 (- 0.19)
Clerical workers	7.2 (1.03)	6.2 (0.95)
Sales workers	8.5 (1.17)	-12.1 (- 0.90)
Craftsmen	8.4 (1.32)*	11.5 (2.27)**
Operatives	- 1.5 (- 0.24)	2.6 (0.57)
Nonfarm laborers	- .003 (- 0.04)	2.2 (0.46)
Service workers	12.7 (1.80)**	4.6 (0.92)
<u>Training prior to 1966</u>		
Some training prior 1966	10.1 (5.36)***	14.3 (5.45)***
$\bar{R}^2$	.146	.141
F	19.82	8.93
Number of sample cases	1867	822

(Table continued on next page.)

- a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker, and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.
- b The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.
- *** Significant at $\alpha \leq .01$.
- ** Significant at $\alpha \leq .05$.
- * Significant at $\alpha \leq .10$.

Table 2A-13 Regressions Relating Earnings and Employment to Selected Characteristics of White Respondents^a. Equation 2
(t-ratios)

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
Constant	1639 (2.46)***	7.36 (97.21)***	0.97 (3.25)***	4.56 (65.00)***	5.72 (7.44)***	1.26 (4.02)***
<u>Highest year of school completed^b</u>						
9-11	606 (2.50)***	0.12 (4.21)***	0.21 (1.94)**	0.09 (3.72)***	- 0.14 (- 0.49)	- 0.05 (- 0.47)
12	900 (3.66)***	0.15 (5.31)***	0.30 (2.73)***	0.12 (4.60)***	- 0.21 (- 0.75)	- 0.28 (- 2.39)***
13 or more	3847 (12.29)***	0.41 (11.48)***	1.48 (10.58)***	0.36 (10.97)***	- 0.28 (- 0.78)	- 0.15 (- 0.99)
<u>Age</u>						
55-59	- 241 (- 1.19)	- 0.03 (- 1.31)*	- 0.15 (- 1.65)**	- 0.05 (- 2.16)**	- 0.08 (- 0.34)	- 0.04 (- 0.37)
60-64	- 516 (- 2.31)**	- 0.09 (- 3.43)***	- 0.22 (- 2.23)**	- 0.08 (- 3.59)***	0.18 (0.68)	- 0.12 (- 1.14)
<u>Health condition, 1966^b</u>						
Health limits work	- 942 (- 4.27)***	- 0.16 (- 6.22)***	- 0.36 (- 3.67)***	- 0.12 (- 5.30)***	0.69 (2.71)***	0.17 (1.61)*
Health prevents work	198 (1.14)	0.04 (0.24)	- 0.36 (- 0.02)	- 0.04 (- 0.25)	- 1.78 (- 1.12)	3.29 (5.07)***
<u>Residence, 1966</u>						
Non-South	717 (3.61)***	0.15 (6.49)***	0.41 (4.67)***	0.15 (7.26)***	0.34 (1.49)*	- 0.04 (- 0.43)
<u>Occupation of current or last job, 1966^b</u>						
Professionals	4248 (6.16)***	1.08 (13.81)***	2.10 (6.84)***	0.98 (13.53)***	- 1.81 (- 2.27)**	- 0.47 (- 1.44)*
Managers	6369 (9.62)***	1.24 (16.44)***	2.68 (9.07)***	1.09 (15.58)***	- 1.76 (- 2.30)**	- 0.77 (- 2.46)***
Clerical workers	2547 (3.69)***	0.88 (11.28)***	1.18 (3.84)***	0.78 (10.77)***	- 1.04 (- 1.30)*	- 0.57 (- 1.75)**
Sales workers	4642 (6.50)***	1.09 (13.48)***	1.41 (4.44)***	0.80 (10.63)***	- 2.14 (- 2.60)***	- 0.55 (- 1.62)*

(Table continued on next page.)

Table 2A-13

Continued

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
<u>Occupation of current or last job, 1966^b</u>						
Craftsmen	3415 (5.48)***	1.01 (14.21)***	1.68 (6.05)***	0.93 (14.23)***	- 1.23 (- 1.71)**	- 0.46 (- 1.57)*
Operatives	2547 (4.09)***	0.86 (12.18)***	1.10 (3.97)***	0.74 (11.28)***	- 1.12 (- 1.55)*	- 0.37 (- 1.27)
Nonfarm laborers	1750 (2.51)***	0.70 (8.88)***	1.04 (3.35)***	0.70 (9.53)***	- 0.34 (- 0.42)	- 0.43 (- 1.32)*
Service workers	1630 (2.37)***	0.63 (8.08)***	0.77 (2.51)***	0.55 (7.58)***	- 1.94 (- 2.44)***	- 0.65 (- 2.00)**
<u>Tenure, 1966^b</u>						
1-4 Years	407 (1.16)	0.14 (3.39)***	- 0.04 (- 0.26)	- 0.01 (- 0.30)	- 3.02 (- 7.45)***	- 0.14 (- 0.84)
5-9 Years	969 (2.77)***	0.27 (6.88)***	0.09 (0.56)	0.06 (1.61)*	- 4.27 (-10.57)***	- 0.16 (- 0.94)
10-19 Years	1789 (5.68)***	0.37 (10.48)***	0.45 (3.18)***	0.17 (5.11)***	- 4.08 (-11.24)***	- 0.39 (- 2.62)***
20 or more years	2313 (7.08)***	0.45 (12.02)***	0.74 (5.05)***	0.25 (7.14)***	- 4.20 (-11.13)***	- 0.34 (- 2.23)**
<u>Training prior to 1966</u>						
Business school or technical institute	1401 (4.16)***	0.15 (4.05)***	0.50 (3.35)***	0.15 (4.10)***	- 0.06 (- 0.15)	- 0.10 (- 0.64)
Company school	927 (2.24)**	0.16 (3.32)***	0.50 (2.71)***	0.15 (3.50)***	- 0.47 (- 0.98)	0.22 (1.13)
Armed forces	600 (1.24)	0.08 (1.45)*	0.17 (0.80)	0.04 (0.71)	- 0.99 (- 1.78)**	0.14 (0.62)
Formal OJT apprenticeship, etc.	175 (0.51)	0.08 (1.97)**	0.16 (1.06)	0.08 (2.08)**	0.08 (0.19)	- 0.04 (- 0.25)
General education	486 (1.11)	0.11 (2.23)**	0.21 (1.07)	0.09 (1.88)**	- 0.29 (- 0.57)	0.23 (1.14)

(Table continued on next page.)

Table 2A-13 Continued

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
$\bar{R}^2$	.357	.460	.310	.412	.123	.033
F	35.58	53.90	28.87	44.59	9.72	3.10
Number of sample cases	1,866	1,866	1,866	1,866	1,866	1,866

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.

b The small number of cases for which information on the variable was not ascertained are included in the analysis but are not reported.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 2A-14 Regressions Relating Earnings and Employment to Selected Characteristics
of Black Respondents^a: Equation 2

(t-ratios)

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
Constant	502 (1.46)*	6.73 (72.74)***	0.73 (4.58)***	4.21 (54.63)***	9.84 (8.75)***	- 0.04 (- 0.10)
<u>Highest year of school completed</u> ^b						
9-11	219 (1.24)	0.10 (2.09)**	0.08 (0.99)	0.06 (1.49)*	0.24 (0.41)	- 0.27 (- 1.37)*
12	685 (3.17)***	0.14 (2.39)***	0.10 (0.99)	0.06 (1.23)	- 0.70 (- 0.99)	- 0.14 (- 0.57)
13 or more	1323 (3.86)***	0.22 (2.40)***	0.46 (2.87)***	0.18 (2.33)***	- 0.89 (- 0.79)	- 0.32 (- 0.85)
<u>Age</u>						
55-59	7 (0.04)	0.003 (0.08)	0.003 (0.05)	- 0.02 (- 0.74)	- 0.98 (- 2.02)**	0.08 (0.46)
60-64	- 209 (- 1.22)	- 0.06 (- 1.38)*	- 0.02 (- 0.19)	- 0.04 (- 0.94)	0.33 (0.59)	- 0.12 (- 0.63)
<u>Health condition, 1966</u> ^b						
Health limits work	- 524 (- 3.04)***	- 0.19 (- 4.19)***	- 0.14 (- 1.79)**	- 0.11 (- 2.91)***	1.01 (1.79)**	0.65 (3.39)***
Health prevents work	c	c	c	c	c	c
<u>Residence, 1966</u>						
Non-South	1647 (12.32)***	0.39 (10.72)***	0.67 (10.80)***	0.33 (11.02)***	1.05 (2.39)***	0.08 (0.53)
<u>Occupation of current or last job, 1966</u> ^b						
Professionals	2308 (4.33)***	0.94 (6.51)***	1.18 (4.78)***	0.88 (7.31)***	- 1.91 (- 1.09)	- 0.02 (- 0.03)
Managers	4855 (7.63)***	1.51 (8.80)***	1.67 (5.64)***	1.15 (8.05)***	- 4.95 (- 2.38)***	- 0.15 (- 0.22)
Clerical workers	2035 (4.99)***	0.95 (8.61)***	0.90 (4.74)***	0.81 (8.87)***	- 2.39 (- 1.79)**	0.18 (0.41)
Sales workers	4650 (5.76)***	1.46 (6.69)***	2.01 (5.36)***	1.29 (7.10)***	- 3.33 (- 1.26)	- 0.45 (- 0.50)

(Table continued on next page.)

Table 2A-14 Continued

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
<u>Occupation of current or last job, 1966^b</u>						
Craftsmen	2422	1.02	1.15	0.92	- 1.48	0.23
	(7.11)***	(11.14)***	(7.26)***	(11.99)***	(- 1.33)*	(0.61)
Operatives	1964	0.92	0.79	0.78	- 1.78	0.21
	(6.23)***	(10.88)***	(5.41)***	(11.06)***	(- 1.72)**	(0.61)
Nonfarm laborers	1510	0.76	0.86	0.79	- 0.07	0.63
	(4.76)***	(8.93)***	(5.85)***	(11.08)***	(- 0.07)	(1.79)*
Service workers	1459	0.83	0.56	0.67	- 1.71	0.11
	(4.38)***	(9.28)***	(3.63)***	(9.00)***	(- 1.57)*	(0.31)
<u>Tenure, 1966^b</u>						
1-4 Years	689	0.36	- 0.06	- 0.01	- 6.23	0.17
	(2.82)***	(5.45)***	(- 0.56)	(- 0.20)	(- 7.78)***	(0.64)
5-9 Years	1244	0.49	0.19	0.08	- 8.67	0.12
	(4.60)***	(6.72)***	(1.50)*	(1.32)*	(- 9.80)***	(0.40)
10-19 Years	1836	0.62	0.42	0.21	- 7.99	0.28
	(8.32)***	(10.46)***	(4.12)***	(4.30)***	(-11.06)***	(1.16)
20 or more years	2362	0.73	0.50	0.25	- 8.18	0.15
	(9.95)***	(11.35)***	(4.56)***	(4.66)***	(-10.52)***	(0.57)
<u>Training prior to 1966</u>						
Business school or technical institute	1472	0.19	0.43	0.15	- 0.09	0.06
	(3.15)***	(1.50)*	(1.96)**	(1.47)*	(- 0.06)	(0.11)
Company school	540	0.03	0.22	0.07	5.46	- 0.19
	(1.19)	(0.23)	(1.02)	(0.69)	(3.65)***	(- 0.37)
Armed forces	718	0.18	0.19	0.05	- 0.75	0.71
	(1.36)*	(1.29)*	(0.76)	(0.40)	(- 0.43)	(1.22)
Formal OJT apprenticeship, etc.	- 39	- 0.06	0.68	0.30	8.38	0.60
	(- 0.07)	(- 0.40)	(2.79)***	(2.57)***	(4.87)***	(1.02)
General education	274	0.11	0.37	0.20	0.27	0.37
	(0.66)	(1.00)	(1.90)**	(2.09)**	(0.20)	(0.81)

(Table continued on next page.)

Table 2A-14

Continued

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
$\bar{R}^2$	.475	.495	.353	.428	.229	.018
F	25.64	27.68	15.88	21.34	9.09	1.48
Number of sample cases	790	790	790	790	790	790

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks during the years prior to the 1966 survey.

b The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.

c Variable did not enter the equation because there are no cases with this characteristic.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 2A-15 Regressions Relating Earnings (1965) and Employment (1966) to Selected Characteristics of White Respondents^a: Equation 3
(t-ratios)

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
Constant	1649 (2.30)**	7.38 (91.36)***	0.94 (2.93)***	4.57 (61.45)***	5.37 (6.46)***	0.92 (2.77)***
<u>Highest year of school completed</u> ^b						
9-11	561 (2.14)**	0.10 (3.48)***	0.22 (1.85)**	0.10 (3.50)***	0.04 (0.13)	- 0.03 (- 0.23)
12	920 (3.42)***	0.15 (4.87)***	0.37 (3.06)***	0.14 (4.93)***	- 0.09 (- 0.30)	- 0.25 (- 1.99)**
13 or more	3867 (11.29)***	0.41 (10.52)***	1.56 (10.15)***	0.38 (10.64)***	- 0.16 (- 0.40)	- 1.00 (- 0.62)
<u>Age</u>						
55-59	- 137 (- 0.63)	- 0.02 (- 0.97)	- 0.11 (- 1.16)	- 0.04 (- 1.80)**	- 0.05 (- 0.20)	- 0.05 (- 0.46)
60-64	- 377 (- 1.53)*	- 0.08 (- 2.92)***	- 0.14 (- 1.27)	- 0.07 (- 2.64)***	0.20 (0.69)	- 0.07 (- 0.66)
<u>Health condition, 1966</u> ^b						
Health limits work	-1028 (- 4.23)***	- 0.17 (- 6.03)***	- 0.41 (- 3.73)***	- 0.13 (- 5.07)***	0.76 (2.69)***	0.23 (2.09)**
Health prevents work	1367 (0.37)	0.26 (0.63)	0.38 (0.23)	0.19 (0.50)	- 1.72 (- 0.40)	3.35 (1.95)**
<u>Residence, 1966</u>						
Non-South	741 (3.42)***	0.15 (6.20)***	0.45 (4.59)***	0.16 (7.09)***	0.37 (1.48)*	0.004 (0.04)*
<u>Occupation of current or last job, 1966</u> ^b						
Professionals	4247 (5.69)***	1.08 (12.80)***	2.04 (6.11)***	0.97 (12.48)***	- 1.76 (- 2.02)**	- 0.20 (- 0.57)
Managers	6555 (9.13)***	1.23 (15.18)***	2.68 (8.33)***	1.07 (14.36)***	- 1.59 (- 1.92)**	- 0.44 (- 1.32)*
Clerical workers	2556 (3.43)***	0.86 (10.28)***	1.06 (3.17)***	0.74 (9.50)***	- 0.75 (- 0.87)	- 0.30 (- 0.87)
Sales workers	4900 (6.31)***	1.11 (12.70)***	1.41 (4.06)***	0.79 (9.81)***	- 2.05 (- 2.28)**	- 0.16 (- 0.46)

(Table continued on next page.)

Table 2A-15 Continued

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
<u>Occupation of current or last job, 1966^b</u>						
Craftsmen	3308	0.98	1.61	0.90	- 1.21	- 0.12
	(4.93)***	(13.00)***	(5.35)***	(12.99)***	(- 1.55)*	(- 0.39)
Operatives	2493	0.84	1.05	0.71	- 0.88	- 0.08
	(3.73)***	(11.10)***	(3.49)***	(10.23)***	(- 1.13)	(- 0.27)
Nonfarm laborers	1798	0.71	1.01	0.68	- 0.48	- 0.13
	(2.39)***	(8.33)***	(2.99)***	(8.75)***	(- 0.56)	(- 0.37)
Service workers	1549	0.61	0.73	0.53	- 1.69	- 0.40
	(2.10)**	(7.40)***	(2.20)**	(6.91)***	(- 1.98)**	(- 1.19)
<u>Tenure, 1966^b</u>						
1-4 Years	314	0.13	- 0.06	- 0.02	- 2.83	- 0.17
	(0.82)	(2.90)***	(- 0.36)	(- 0.54)	(- 6.38)***	(- 0.94)
5-9 Years	678	0.24	- 0.03	0.02	- 4.17	- 0.16
	(1.80)**	(5.59)***	(- 0.15)	(0.59)	(- 9.54)***	(- 0.93)
10-19 Years	1597	0.36	0.39	0.15	- 3.98	- 0.41
	(4.67)***	(9.28)***	(2.52)***	(4.17)***	(-10.04)***	(- 2.58)***
20 or more years	2085	0.42	0.44	0.21	- 4.17	- 0.38
	(5.82)***	(10.48)***	(3.96)***	(5.78)***	(-10.06)***	(- 2.28)**
<u>Training prior to 1966</u>						
Some training prior 1966	558	0.08	0.21	0.07	0.06	0.06
	(2.60)***	(3.32)***	(2.22)**	(2.99)***	(0.26)	(0.64)
<u>Training 1966-1969</u>						
Business college or technical institute	-1311	- 0.13	- 0.43	- 0.06	- 0.25	- 0.30
	(- 0.47)	(- 0.42)	(- 0.35)	(- 0.20)	(- 0.08)	(- 0.23)
Company school	2002	0.20	0.62	0.17	- 0.47	- 0.31
	(2.35)***	(2.12)**	(1.61)*	(1.97)**	(- 0.47)	(- 0.78)
Correspondence	83	0.21	- 0.34	0.04	- 1.14	- 0.51
	(0.03)	(0.69)	(- 0.28)	(0.14)	(- 0.36)	(- 0.41)
General education	-1302	- 0.08	- 0.59	- 0.09	- 0.79	0.57
	(- 0.99)	(- 0.55)	(- 1.00)	(- 0.64)	(- 0.52)	(0.94)
Other	1299	- 0.02	1.09	0.09	- 0.15	- 0.14
	(1.57)*	(- 0.24)	(2.92)***	(1.01)	(- 0.15)	(- 0.37)

(Table continued on next page.)

Table 2A-15

Continued

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
<u>Training prior to 1966</u> <u>x training 1966-1969</u> (Some training prior to 1966 by source of training 1966-1969)						
Business college or technical institute	5269 (1.62)*	0.55 (1.50)*	1.82 (1.25)	0.40 (1.18)	- 0.16 (- 0.04)	- 0.13 (- 0.09)
Company school	-1010 (- 1.06)	- 0.10 (- 0.92)	- 0.40 (- 0.92)	- 0.11 (- 1.07)	- 0.10 (- 0.09)	0.16 (0.36)
Correspondence	-1420 (- 0.49)	- 0.34 (- 1.03)	- 0.32 (- 0.25)	- 0.17 (- 0.58)	2.12 (0.63)	0.11 (0.08)
General education	1627 (1.02)	0.13 (0.74)	0.79 (1.10)	0.15 (0.93)	0.45 (0.25)	0.37 (0.50)
Other	-1810 (- 1.83)**	0.02 (0.17)	- 1.28 (- 2.90)***	- 0.14 (- 1.38)*	- 0.28 (- 0.25)	0.24 (0.52)
$\bar{R}^2$	.356	.453	.303	.408	.119	.011
F	25.32	37.36	20.14	31.23	6.92	1.47
Number of sample cases	1,627	1,627	1,627	1,627	1,627	1,627

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.

b The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 2A-16 Regressions Relating Earnings (1965) and Employment (1966) to Selected Characteristics of Black Respondents^a: Equation 3
(t-ratios)

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
Constant	524 (1.30)*	6.78 (67.18)***	0.89 (4.90)***	4.40 (51.13)***	10.82 (8.99)***	0.16 (0.37)
<u>Highest year of school completed^b</u>						
9-11	113 (0.58)	0.08 (1.55)*	0.04 (0.43)	0.04 (0.91)	0.11 (0.19)	- 0.33 (- 1.56)*
12	753 (3.20)***	0.15 (2.38)***	0.06 (0.59)	0.04 (0.80)	- 1.36 (- 1.93)**	- 0.01 (- 0.05)
13 or more	1490 (5.87)***	0.25 (2.48)***	0.47 (2.73)***	0.17 (2.12)**	- 1.97 (- 1.71)**	- 0.32 (- 0.76)
<u>Age</u>						
55-59	- 84 (- 0.52)	- 0.02 (- 0.59)	0.004 (0.06)	- 0.02 (- 0.53)	- 0.39 (- 0.81)	0.01 (0.06)
60-64	- 85 (- 0.44)	- 0.03 (- 0.67)	0.04 (0.46)	0.01 (0.28)	0.81 (1.39)*	- 0.12 (- 0.56)
<u>Health condition, 1966^b</u>						
Health limits work	- 496 (- 2.41)***	- 0.17 (- 3.27)***	- 0.17 (- 1.79)**	- 0.11 (- 2.45)***	- 0.06 (- 0.10)	0.62 (2.76)***
Health prevents work	c	c	c	c	c	c
<u>Residence, 1966</u>						
Non-South	1711 (11.70)***	0.39 (10.19)***	0.68 (10.25)***	0.32 (10.28)***	0.63 (1.43)*	0.09 (0.54)
<u>Occupation of current or last job, 1966^b</u>						
Professionals	2507 (4.20)***	0.94 (6.10)***	1.16 (4.32)***	0.75 (5.83)***	- 1.37 (- 0.77)	- 0.17 (- 0.27)
Managers	4714 (6.58)***	1.38 (7.44)***	1.68 (5.20)***	1.03 (6.74)***	- 3.47 (- 1.62)*	- 0.51 (- 0.65)
Clerical workers	2163 (4.52)***	0.91 (7.31)***	0.82 (3.80)***	0.67 (6.54)***	- 2.43 (- 1.70)**	0.01 (0.02)
Sales workers	3329 (2.44)***	1.23 (3.50)***	1.63 (2.65)***	1.08 (3.71)***	- 2.48 (- 0.61)	- 0.38 (- 0.26)

(Table continued on next page.)

Table 2A-16

Continued

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
<u>Occupation of current or last job, 1966^b</u>						
Craftsmen	2266 (5.67)***	0.93 (9.01)***	0.93 (5.19)***	0.72 (8.43)***	- 1.86 (- 1.56)*	0.08 (0.19)
Operatives	1865 (4.98)***	0.85 (8.82)***	0.65 (3.85)***	0.61 (7.62)***	- 2.32 (- 2.07)**	0.04 (0.10)
Nonfarm laborers	1544 (4.08)***	0.75 (7.64)***	0.77 (4.51)***	0.64 (7.84)***	- 1.39 (- 1.22)	0.50 (1.21)
Service workers	1399 (3.57)***	0.78 (7.74)***	0.44 (2.47)***	0.52 (6.21)***	- 2.28 (- 1.94)**	- 0.07 (- 0.17)
<u>Tenure, 1966^b</u>						
1-4 Years	685 (2.43)***	0.37 (5.29)***	- 0.15 (- 1.16)	- 0.07 (- 1.20)	- 7.20 (- 8.51)***	0.26 (0.86)
5-9 Years	1236 (3.55)***	0.48 (6.16)***	0.15 (1.08)	0.06 (0.92)	- 9.04 (- 9.67)***	0.20 (0.59)
10-19 Years	1869 (7.30)***	0.64 (10.01)***	0.36 (3.11)***	0.17 (3.10)***	- 8.34 (-10.88)***	0.22 (0.78)
20 or more years	2288 (8.42)***	0.71 (10.47)***	0.38 (3.12)***	0.17 (2.99)***	- 8.66 (-10.64)***	0.21 (0.71)
<u>Training prior to 1966</u>						
Some training prior 1966	519 (2.87)***	0.10 (2.06)**	0.35 (4.35)***	0.17 (4.35)***	1.35 (2.49)***	- 0.17 (- 0.85)
<u>Training 1966-1969</u>						
Business college or technical institute	c	c	c	c	c	c
Company school	1340 (1.99)**	0.26 (1.44)*	0.72 (2.26)**	0.32 (2.11)**	0.19 (0.09)	- 0.33 (- 0.42)
Correspondence	c	c	c	c	c	c
General education	626 (0.31)	0.23 (0.43)	0.45 (0.49)	0.29 (0.67)	0.23 (0.04)	- 0.43 (- 0.20)
Other	- 283 (- 0.32)	- 0.05 (- 0.20)	0.29 (0.72)	0.14 (0.72)	4.79 (1.81)**	- 0.54 (- 0.56)

(Table continued on next page.)

Table 2A-16

Continued

Characteristics	1965 Annual earnings	Log 1965 annual earnings	1966 Average hourly earnings (dollars)	Log 1966 average hourly earnings	Weeks unemployed in 1965	Weeks out of the labor force in 1965
<u>Training prior to 1966</u> <u>x training 1966-1969</u> (Some training prior to 1966 by source of training 1966-1969)						
Business college or technical institute	- 308 (- 0.16)	0.20 (0.38)	0.35 (0.39)	0.24 (0.55)	-10.31 (- 1.73)**	5.92 (2.73)
Company school	-1179 (- 1.39)*	- 0.29 (- 1.32)*	- 0.76 (- 2.00)**	- 0.40 (- 2.18)**	2.41 (0.95)	1.18 (1.27)
Correspondence	2253 (1.08)	0.65 (1.21)	- 0.33 (- 0.35)	- 0.06 (- 0.13)	- 6.74 (- 1.07)	0.83 (0.36)
General education	- 413 (- 0.19)	- 0.12 (- 0.21)	- 0.51 (- 0.51)	- 0.25 (- 0.53)	- 1.88 (- 0.29)	0.22 (0.09)
Other	- 301 (- 0.24)	- 0.14 (- 0.43)	0.08 (0.14)	- 0.08 (- 0.28)	- 5.80 (- 1.55)*	0.44 (0.32)
$\bar{R}^2$	.456	.463	.346	.382	.198	.004
F	17.53	18.57	11.44	13.21	5.88	1.08
Number of sample cases	672	672	672	672	672	672

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks in the year prior to the 1966 survey.

b The small number of cases for which information on the variable was not ascertained were included in the analysis but are not reported.

c Each respondent who obtained this source of training between 1966 and 1969 also received some training prior to 1966.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 2A-17 Regressions Relating Earnings (1970) and Employment (1969-1971) to Selected Characteristics of White Respondents^a: Equation 3
(t-ratios)

Characteristics	1970 Annual earnings	Log 1970 annual earnings	1971 Average hourly earnings (dollars)	Log 1971 average hourly earnings	Weeks unemployed 1969-1971	Weeks out of the labor force 1969-1971
Constant	4446 (4.11)***	7.80 (77.89)***	1.40 (2.95)***	4.85 (53.47)***	16.32 (8.33)***	6.06 (2.54)***
<u>Highest year of school completed</u> ^b						
9-11	793 (2.21)**	0.12 (3.63)***	0.35 (2.21)**	0.09 (3.00)***	- 0.17 (- 0.26)	0.01 (0.01)
12	1470 (4.00)***	0.19 (5.48)***	0.48 (3.00)***	0.13 (4.13)***	0.50 (0.76)	- 1.61 (- 2.00)**
13 or more	4995 (10.91)***	0.39 (9.12)***	2.06 (10.27)***	0.38 (9.50)***	- 0.03 (- 0.03)	- 0.27 (- 0.27)
<u>Age</u>						
55-59	- 483 (- 1.62)*	- 0.05 (- 1.92)**	- 0.09 (- 0.67)	- 0.002 (- 0.09)	- 0.31 (- 0.57)	1.01 (1.54)*
60-64	-1419 (- 4.19)***	- 0.19 (- 6.07)***	- 0.18 (- 1.22)	- 0.05 (- 1.66)**	0.90 (1.46)*	4.65 (6.24)***
<u>Health condition, 1971</u> ^b						
Health limits work	-1287 (- 3.93)***	- 0.18 (- 5.93)***	- 0.46 (- 3.19)***	- 0.08 (- 2.75)***	1.24 (2.09)**	4.04 (5.59)***
Health prevents work	-3734 (- 3.10)***	- 0.96 (- 8.61)***	- 1.08 (- 2.05)**	- 0.62 (- 5.83)***	1.54 (0.71)	37.36 (14.10)***
<u>Residence, 1971</u>						
Non-South	832 (2.80)***	0.10 (3.76)***	0.64 (4.89)***	0.17 (6.55)***	0.08 (0.16)	1.00 (1.54)*
<u>Occupation of current or last job, 1971</u> ^b						
Professionals	3854 (3.53)***	0.99 (9.83)***	3.38 (7.07)***	1.05 (10.98)***	- 1.94 (- 0.98)	0.62 (0.26)
Managers	6034 (5.74)***	1.11 (11.43)***	3.93 (8.53)***	1.13 (12.20)***	- 1.96 (- 1.03)	- 1.53 (- 0.66)
Clerical workers	1060 (0.96)	0.76 (7.46)***	2.03 (4.19)***	0.87 (8.95)***	- 1.28 (- 0.64)	1.43 (0.59)
Sales workers	3514 (3.01)***	0.95 (8.80)***	2.30 (4.50)***	0.88 (8.52)***	- 2.71 (- 1.28)*	- 1.83 (- 0.71)

(Table continued on next page.)

Table 2A-17

Continued

Characteristics	1970 Annual earnings	Log 1970 annual earnings	1971 Average hourly earnings (dollars)	Log 1971 average hourly earnings	Weeks unemployed 1969-1971	Weeks out of the labor force 1969-1971
<u>Occupation of current or last job, 1971^b</u>						
Craftsmen	1875	0.84	2.43	0.97	- 0.46	0.48
	(1.87)**	(9.02)***	(5.52)***	(10.95)***	(- 0.25)	(0.22)
Operatives	588	0.67	1.74	0.78	- 1.23	0.09
	(0.59)	(7.23)***	(3.97)***	(8.82)***	(- 0.68)	(0.04)
Nonfarm laborers	- 35	0.50	1.40	0.66	0.16	3.17
	(- 0.03)	(4.90)***	(2.86)***	(6.71)***	(0.08)	(1.39)*
Service workers	664	0.65	1.42	0.57	- 2.60	- 1.65
	(0.62)	(6.52)***	(2.99)***	(6.05)***	(- 1.33)*	(- 0.69)
<u>Tenure, 1971^b</u>						
1-4 Years	830	0.17	- 0.40	- 0.05	-11.82	- 3.64
	(1.50)*	(3.37)***	(- 1.65)**	(- 1.40)*	(-11.82)***	(- 2.99)***
5-9 Years	1704	0.29	- 0.29	--	-14.75	- 6.24
	(2.98)***	(5.55)***	(- 1.16)	--	(-14.25)***	(- 4.95)***
10-19 Years	1793	0.32	- 0.23	0.04	-13.89	- 6.11
	(3.45)***	(6.63)***	(- 1.02)	(1.12)	(14.77)***	(- 5.34)***
20 or more years	3097	0.44	0.39	0.16	-15.15	- 6.45
	(6.03)***	(9.25)***	(1.75)**	(5.05)***	(-16.30)***	(- 5.70)***
<u>Training prior to 1966</u>						
Some training prior 1966	556	0.07	0.31	0.04	- 0.49	- 0.44
	(1.87)**	(2.59)***	(2.38)***	(1.58)*	(- 0.92)	(- 0.67)
<u>Training 1966-1969</u>						
Business college or technical institute	-1724	- 0.04	- 1.16	- 0.15	- 1.39	- 3.18
	(- 0.45)	(- 0.11)	(- 0.69)	(- 0.46)	(- 0.20)	(- 0.38)
Company school	1382	0.19	0.25	0.07	- 1.09	- 1.08
	(1.18)	(1.70)**	(0.49)	(0.70)	(- 0.51)	(- 0.42)
Correspondence	- 59	0.04	- 0.59	- 0.18	- 1.01	- 2.54
	(- 0.02)	(0.13)	(- 0.36)	(- 0.54)	(- 0.15)	(- 0.31)
General education	228	0.11	- 0.20	- 0.05	- 0.76	- 2.55
	(0.13)	(0.63)	(- 0.26)	(- 0.34)	(- 0.23)	(- 0.64)
Other	- 251	- 0.004	0.72	0.13	0.04	0.34
	(- 0.22)	(- 0.04)	(1.45)*	(1.31)*	(0.02)	(0.13)

(Table continued on next page.)

Table 2A-17

Continued

Characteristics	1970 Annual earnings	Log 1970 annual earnings	1971 Average hourly earnings (dollars)	Log 1971 average hourly earnings	Weeks unemployed 1969-1971	Weeks out of the labor force 1969-1971
Training prior to 1966 x training 1966-1969 (Some training prior to 1966 by source of training 1966-1969)						
Business college or technical institute	6432 (1.43)*	0.33 (0.80)	2.38 (1.21)	0.44 (1.10)	1.39 (0.17)	3.95 (0.40)
Company school	- 308 (- 0.23)	- 0.08 (- 0.64)	0.29 (0.50)	0.04 (0.38)	1.59 (0.66)	1.28 (0.44)
Correspondence	-1008 (- 0.25)	- 0.20 (- 0.54)	0.10 (0.05)	0.20 (0.57)	0.003 (0.00)	5.28 (0.60)
General education	958 (0.44)	- 0.05 (- 0.25)	0.94 (0.98)	0.16 (0.81)	0.16 (0.04)	7.67 (1.58)*
Other	- 387 (- 0.28)	- 0.03 (- 0.25)	- 0.91 (- 1.52)*	- 0.12 (- 0.97)	- 0.44 (- 0.18)	0.80 (0.27)
R^2	.333	.400	.317	.348	.158	.171
F	22.97	30.27	21.42	25.07	9.23	10.05
Number of sample cases	1,627	1,627	1,627	1,627	1,627	1,627

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.

b The small number of cases for which information on this variable was not ascertained were included in the analysis but are not reported.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 2A-18 Regressions Relating Earnings (1970) and Employment (1969-1971) to Selected Characteristics of Black Respondents^a: Equation 3

(t-ratios)

Characteristics	1970 Annual earnings	Log 1970 annual earnings	1971 Average hourly earnings (dollars)	Log 1971 average hourly earnings	Weeks unemployed 1969-1971	Weeks out of the labor force 1969-1971
Constant	2202 (3.40)***	7.63 (66.63)***	1.17 (3.50)***	4.75 (43.60)***	10.96 (5.09)***	4.88 (1.55)*
<u>Highest year of school completed</u> ^b						
9-11	- 37 (- 0.14)	0.03 (0.53)	0.03 (0.22)	0.01 (0.28)	0.53 (0.58)	- 1.78 (- 1.33)*
12	593 (1.81)**	0.08 (1.43)*	0.32 (1.88)**	0.07 (1.21)	- 0.40 (- 0.36)	- 1.61 (- 1.01)
13 or more	2128 (4.13)***	0.20 (2.16)**	1.08 (4.06)***	0.21 (2.43)***	1.21 (0.71)	- 0.45 (- 0.18)
<u>Age</u>						
55-59	- 226 (- 1.00)	- 0.01 (- 0.31)	- 0.10 (- 0.81)	- 0.04 (- 1.09)	0.89 (1.18)	- 0.13 (- 0.12)
60-64	- 581 (- 2.10)**	- 0.14 (- 2.81)***	- 0.07 (- 0.51)	- 0.10 (- 2.25)**	- 0.46 (- 0.50)	4.97 (3.71)***
<u>Health condition, 1971</u> ^b						
Health limits work	- 742 (- 2.69)***	- 0.17 (- 3.51)***	0.03 (0.23)	0.03 (0.60)	0.69 (0.75)	10.38 (7.74)***
Health prevents work	-4109 (- 3.96)***	- 0.88 (- 4.82)***	- 0.51 (- 0.94)	- 0.09 (- 0.54)	11.90 (3.45)***	53.82 (10.67)***
<u>Residence, 1971</u>						
Non-South	2134 (10.23)***	0.37 (9.99)***	1.03 (9.56)***	0.35 (9.83)***	0.81 (1.17)	- 0.37 (- 0.37)
<u>Occupation of current or last job, 1971</u> ^b						
Professionals	2965 (3.56)***	0.53 (3.61)***	1.67 (3.86)***	0.75 (5.33)***	0.84 (0.30)	- 3.53 (- 0.87)
Managers	5707 (6.23)***	0.97 (5.98)***	2.30 (4.85)***	0.98 (6.36)***	0.02 (0.01)	- 1.40 (- 0.32)
Clerical workers	2342 (3.22)***	0.55 (4.28)***	1.44 (3.83)***	0.80 (6.56)***	1.95 (0.81)	0.49 (0.14)
Sales workers	3796 (1.41)*	0.85 (1.78)**	2.36 (1.70)**	1.13 (2.52)***	2.81 (0.32)	- 0.64 (- 0.05)

(Table continued on next page.)

Table 2A-18 Continued

Characteristics	1970 Annual earnings	Log 1970 annual earnings	1971 Average hourly earnings (dollars)	Log 1971 average hourly earnings	Weeks unemployed 1969-1971	Weeks out of the labor force 1969-1971
<u>Occupation of current or last job, 1971^b</u>						
Craftsmen	2173 (3.44)***	0.52 (4.64)***	1.48 (4.53)***	0.79 (7.42)***	2.79 (1.33)*	0.78 (0.26)
Operatives	1882 (3.09)***	0.47 (4.32)***	1.17 (3.70)***	0.68 (6.65)***	2.81 (1.39)*	1.82 (0.62)
Nonfarm laborers	1551 (2.51)***	0.35 (3.19)***	1.29 (4.03)***	0.69 (6.63)***	3.42 (1.66)**	1.15 (0.38)
Service workers	1313 (2.10)**	0.38 (3.45)***	0.92 (2.85)***	0.63 (6.02)***	1.80 (0.87)	- 2.37 (- 0.78)
<u>Tenure, 1971^b</u>						
1-4 Years	469 (1.06)	0.26 (3.33)***	- 0.14 (- 0.61)	- 0.05 (- 0.65)	-12.20 (- 8.30)***	- 0.44 (- 0.21)
5-9 Years	1219 (2.66)***	0.41 (5.11)***	- 0.12 (- 0.51)	- 0.03 (- 0.35)	-12.82 (- 8.42)***	- 4.34 (- 1.95)**
10-19 Years	1802 (4.33)***	0.49 (6.66)***	0.30 (1.38)*	0.06 (0.91)	-13.77 (- 9.94)***	- 4.24 (- 2.09)**
20 or more years	2121 (5.10)***	0.56 (7.60)***	0.47 (2.17)**	0.15 (2.20)**	-13.29 (- 9.63)***	- 4.89 (- 2.42)***
<u>Training prior to 1966</u>						
Some training prior 1966	750 (2.95)***	0.12 (2.60)***	0.48 (3.68)***	0.14 (3.19)***	- 0.15 (- 0.18)	0.95 (0.77)
<u>Training 1966-1969</u>						
Business college or technical institute	c	c	c	c	c	c
Company school	674 (0.67)	0.18 (1.03)	0.14 (0.26)	0.16 (0.95)	- 1.38 (- 0.42)	- 2.65 (- 0.55)
Correspondence	c	c	c	c	c	c
General education	1340 (0.47)	0.29 (0.56)	0.56 (0.38)	0.28 (0.59)	- 0.89 (- 0.09)	- 2.34 (- 0.17)
Other	1057 (0.85)	0.18 (0.80)	0.50 (0.78)	0.17 (0.80)	- 0.99 (- 0.24)	- 2.48 (- 0.41)

(Table continued on next page.)

Table 2A-18

Continued

Characteristics	1970 Annual earnings	Log 1970 annual earnings	1971 Average hourly earnings (dollars)	Log 1971 average hourly earnings	Weeks unemployed 1969-1971	Weeks out of the labor force 1969-1971
<u>Training prior to 1966</u> <u>x training 1966-1969</u> (Some training prior to 1966 by source of training 1966-1969)						
Business college or technical institute	2862 (1.01)	0.73 (1.46)*	0.70 (0.48)	0.28 (0.59)	-13.60 (- 1.45)*	- 5.62 (- 0.41)
Company school	1250 (1.04)	0.06 (0.29)	0.11 (0.18)	- 0.08 (- 0.41)	0.80 (0.20)	- 0.11 (- 0.02)
Correspondence	-3006 (- 1.03)	- 0.22 (- 0.42)	- 2.04 (- 1.35)*	- 0.39 (- 0.79)	0.79 (0.08)	0.36 (0.03)
General education	-1066 (- 0.34)	- 0.16 (- 0.29)	- 0.45 (- 0.28)	- 0.17 (- 0.32)	0.74 (0.07)	0.79 (0.05)
Other	- 599 (- 0.34)	- 0.17 (- 0.55)	- 0.56 (- 0.61)	- 0.20 (- 0.67)	- 0.61 (- 0.10)	- 2.76 (- 0.32)
$\bar{R}^2$	.379	.396	.284	.301	.138	.245
F	13.07	13.94	8.84	9.48	4.17	7.41
Number of sample cases	672	672	672	672	672	672

a Respondents 50 to 64 years of age whose current or last job in 1966, 1967, 1969 and 1971 was as a wage or salary worker and who were in the labor force 35 or more weeks during the year prior to the 1966 survey.

b The small number of cases for which information on this variable was not ascertained were included with the analysis but are not reported.

c Each respondent who obtained this source of training between 1966 and 1969 also received some training prior to 1966.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 3A-1 Mean Hourly Earnings in 1966 and 1971 and Mean Ratio of 1971/1966 Earnings for White Craftsmen and Operatives, by Comparative Job Status, 1966-1971^a

Measure	Nonchangers	Voluntary changers	Involuntary changers
CRAFTSMEN			
Number of respondents	336	63	67
Mean hourly earnings, 1966	\$3.40	\$3.17	\$3.83
Mean hourly earnings, 1971	\$4.68	\$4.40	\$5.41
Mean ratio, 1971/1966 ^b	1.39	1.43	1.45
OPERATIVES			
Number of respondents	292	35	27
Mean hourly earnings, 1966	\$2.83	\$2.14	\$2.55
Mean hourly earnings, 1971	\$3.91	\$2.97	\$3.42
Mean ratio, 1971/1966 ^b	1.40	1.55	1.42

- a Respondents employed as nonagricultural wage and salary workers in 1966 and employed as wage and salary workers in 1971. To minimize the effects of reporting and coding errors, the universe has been further restricted to respondents with hourly earnings in the two reference periods between 75 cents and 25 dollars and for whom the ratio of earnings in one period to the other did not exceed 3.
- b Arithmetic mean of the relative earnings (1971 ÷ 1966) computed for each respondent.

Table 3A-2 Proportion of Respondents Highly Satisfied with 1969 Job,
by Degree of Satisfaction with 1967 Job, Comparative Job
Status, 1967-1969, and Race^a

Comparative job status, 1967-1969	Total or average	Liked job very much	Liked job somewhat	Disliked job
WHITES				
Total or average				
Number of respondents	2,020	1,166	684	170
Horizontal percent distribution	100	58	34	8
Percent highly satisfied, 1969	54	68	36	31
Nonchangers				
Number of respondents	1,753	1,043	583	127
Horizontal percent distribution	100	60	33	7
Percent highly satisfied, 1969	54	68	34	29
Voluntary changers				
Number of respondents	145	68	54	23
Horizontal percent distribution	100	46	37	17
Percent highly satisfied, 1969	55	67	48	b
Involuntary changers				
Number of respondents	98	43	42	13
Horizontal percent distribution	100	43	44	14
Percent highly satisfied, 1969	45	52	45	b
BLACKS				
Total or average				
Number of respondents	814	439	312	63
Horizontal percent distribution	100	52	39	9
Percent highly satisfied, 1969	51	62	40	33
Nonchangers				
Number of respondents	690	394	248	48
Horizontal percent distribution	100	55	37	8
Percent highly satisfied, 1969	53	65	40	34
Voluntary changers				
Number of respondents	56	18	29	9
Horizontal percent distribution	100	33	52	15
Percent highly satisfied, 1969	40	b	45	b
Involuntary changers				
Number of respondents	38	13	20	5
Horizontal percent distribution	100	40	46	14
Percent highly satisfied, 1969	32	b	b	b

^a Respondents employed as nonagricultural wage and salary workers in 1967 and employed as wage and salary workers in 1969.

^b Percentages not shown where base is fewer than 25 sample cases.

Table 3A-3 Proportion of Respondents Highly Satisfied with 1971 Job, by Degree of Satisfaction with 1969 Job, Comparative Job Status, 1969-1971, and Race^a

Comparative job status, 1969-1971	Total or average	Liked job very much	Liked job somewhat	Disliked job
WHITES				
Total or average				
Number of respondents	1,844	959	731	108
Horizontal percent distribution	100	54	40	6
Percent highly satisfied, 1971	45	65	25	10
Nonchangers				
Number of respondents	1,617	858	638	89
Horizontal percent distribution	100	55	40	5
Percent highly satisfied, 1971	45	66	22	5
Voluntary changers				
Number of respondents	85	38	35	9
Horizontal percent distribution	100	46	44	11
Percent highly satisfied, 1971	48	56	47	b
Involuntary changers				
Number of respondents	110	46	47	8
Horizontal percent distribution	100	47	44	9
Percent highly satisfied, 1971	41	49	34	b
BLACKS				
Total or average				
Number of respondents	721	363	285	37
Horizontal percent distribution	100	53	41	b
Percent highly satisfied, 1971	51	64	39	16
Nonchangers				
Number of respondents	631	328	246	28
Horizontal percent distribution	100	54	41	5
Percent highly satisfied, 1971	51	65	37	18
Voluntary changers				
Number of respondents	33	12	13	6
Horizontal percent distribution	100	44	40	16
Percent highly satisfied, 1971	62	b	b	b
Involuntary changers				
Number of respondents	45	18	23	2
Horizontal percent distribution	100	48	48	4
Percent highly satisfied, 1971	59	b	b	b

a Respondents employed as nonagricultural wage and salary workers in 1969 and employed as wage and salary workers in 1971.

b Percentages not shown where base is fewer than 25 sample cases.

Table 4A-1 Major Occupation Group in 1966 Survey Week, by Major Occupation Group of First Job After School and Race^a
(Percentage distribution)

Major occupation group 1966										
Major occupation group of first job	Total number of respondents	Total percent	Professionals, technicians	Managers	Clerical and sales workers	Craftsmen	Operatives	Nonfarm laborers	Service workers	Farm workers
WHITES										
Professionals, technicians	130	100	69	14	9	8	1	0	0	0
Managers	36	100	14	46	16	22	3	0	0	0
Clerical/sales workers	261	100	11	26	23	20	16	b	3	1
Craftsmen	130	100	12	14	4	46	16	2	6	1
Operatives	404	100	4	14	12	32	27	4	8	b
Nonfarm laborers	209	100	3	7	11	37	28	8	4	1
Service workers	54	100	12	13	9	30	22	3	12	0
Farm workers	275	100	1	7	6	32	29	8	9	9
BLACKS										
Professionals, technicians	16	c	c	c	c	c	c	c	c	c
Managers	3	c	c	c	c	c	c	c	c	c
Clerical/sales workers	20	c	c	c	c	c	c	c	c	c
Craftsmen	15	c	c	c	c	c	c	c	c	c
Operatives	129	100	2	1	6	18	42	14	17	1
Nonfarm laborers	124	100	1	1	4	18	34	23	17	2
Service workers	70	100	4	4	10	15	34	8	23	1
Farm workers	205	100	1	0	4	11	29	24	15	17

a Respondents 50 to 64 years of age in 1971 who were not retired from their "regular" job as of 1966 or 1971, who were employed as wage and salary workers in both the 1966 and 1971 survey weeks and who were nonmigrants between 1966 and 1971. Table excludes men whose first job after leaving school was in the military service.

b Percent between 0.1 and 0.5.

c Percentage distribution not shown where base represents fewer than 25 sample cases.

Table 4A-2 Major Occupation Group in 1970, by Major Occupation Group in 1965 and Race, According to the 1970 Census: Males 50 to 64 Years of Age in 1970 Employed in 1965 and 1970

(Percentage distribution)

Major occupation group in 1965	Major occupation group 1970								
	Total number (thousands)	Professionals, technicians	Managers	Clerical and sales workers	Craftsmen	Operatives	Nonfarm laborers	Service workers	Farm workers
WHITES									
Professionals, technicians	1,058	100	90	4	2	1	a	1	a
Managers	1,396	100	3	81	8	2	a	2	a
Clerical/sales workers	1,336	100	2	8	83	2	1	2	a
Craftsmen	2,224	100	1	3	2	87	1	2	a
Operatives	1,661	100	1	2	2	6	2	3	a
Nonfarm laborers	406	100	1	3	4	9	68	5	1
Service workers	630	100	1	3	3	5	2	82	a
Farm workers	609	100	a	2	2	4	3	3	83
NEGROES									
Professionals, technicians	26	100	86	4	3	1	1	4	a
Managers	22	100	3	79	6	3	2	4	a
Clerical/sales workers	45	100	2	3	83	2	3	4	a
Craftsmen	96	100	a	1	1	86	3	3	a
Operatives	180	100	a	a	1	4	4	4	a
Nonfarm laborers	126	100	a	a	2	6	78	6	1
Service workers	129	100	1	1	2	2	3	88	a
Farm workers	54	100	a	a	a	3	10	6	74

Source: Computed from Occupation and Residence in 1965, Census of Population Subject Report, PC(2), pt. 7E (Washington: U.S. Department of Commerce, Social and Economic Statistics Administration, Bureau of the Census, 1973), Table 2, pp. 8-10.

a Between 0.1 and 0.5 percent.

Table 4A-3

Means and Standard Deviations of Variables Used in Models of Probability of Occupational Change, by Comparison of Employer 1966 and 1971^a

Variable name	Unit of measurement	Same employer		Different employer	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.
MOBUP	1 = Changed occupations upward 0 = Other	.16	b	.29	b
MOBDWN	1 = Changed occupation downward 0 = Other	.11	b	.31	b
OCC66	Duncan Index	38.7	23.9	34.2	22.8
EDUC	Years	10.3	3.4	9.9	3.4
TRN66	1 = Training before 1966 only 0 = Other	.35	b	.33	b
TRN71	1 = Training 1966-1971 only 0 = Other	.04	b	.07	b
TRNBTH	1 = Training before and after 1966 0 = Other	.15	b	.11	b
HEALTH	1 = No work limitation 1966 0 = Other	.84	b	.83	b
MSP71	1 = Married wife present 1971 0 = Other	.92	b	.91	b
TENURE	Years	20.0	9.9	2.0	2.5
VOLUNT	1 = Left 1966 employer voluntarily 0 = Other	c	c	.55	b
ALTJOB	1 = Received job offer 1966-1971 0 = No job offer 1966-1971	.19	b	c	c
PVT66	1 = Private sector employee 0 = Government employee	.78	b	c	c
RACE	1 = Black 0 = White	.09	b	.07	b
BESTOC	1 = Best and 1966 occupations differ 0 = Best and 1966 occupations are the same	.34	b	.44	b
AGE	Years	55.7	4.1	55.3	4.0
MKTSIZ	10,000 Persons	76.9	120.2	71.4	123.8
UNRATE	Percentage	5.2	1.6	5.1	1.6
INDDIV	Ordinal index	15.6	6.4	17.3	7.4
Number of respondents		1,444		308	

(Table continued on next page.)

Table 4A-3

Continued

- a Respondents 50 to 64 years of age in 1971 who were not retired in 1966 or 1971, nonmigrants between 1966 and 1971, and employed wage and salary workers in 1966 and 1971.
- b The standard deviation of a binary variable is $\sqrt{p(1-p)}$ where p is the proportion of cases with the requisite trait. Therefore, it can be computed from the number shown in the $\bar{X}$ column.
- c Variable is not applicable to this group.

Table 4A-4 Means and Standard Deviations of Variables Used in Models of Distance of Occupational Change, by Comparison of Employer 1966 and 1971^a

Variable name	Unit of measurement	Same employer				Different employer			
		Whites		Blacks		Voluntary		Involuntary	
		X	S.D.	X	S.D.	X	S.D.	X	S.D.
ΔOCC	Difference in Duncan Index	4.1	21.3	3.9	20.3	- 1.2	20.5	- 2.0	23.9
OCC66	Duncan Index	39.9	22.3	20.4	15.0	33.5	23.7	32.2	20.0
EDUC	Years	10.7	3.3	7.5	3.7	10.0	3.4	9.2	2.7
TRN66	1 = Training before 1966 only								
	0 = Other	.33	b	.20	b	.29	b	.32	b
TRN71	1 = Training 1966-1971 only								
	0 = Other	.06	b	.03	b	.08	b	.10	b
TRNBTH	1 = Training before and after 1966								
	0 = Other	.17	b	.09	b	.09	b	.07	b
HEALTH	1 = No work limitation 1966								
	0 = Other	.83	b	.89	b	.78	b	.92	b
MSP71	1 = Married wife present 1971								
	0 = Other	.95	b	.81	b	.87	b	.89	b
TENURE	Years	19.6	10.4	18.6	8.7	2.0	1.5	2.0	2.3
ALTJOB	1 = Received job offer 1966-1971								
	0 = No job offer 1966-1971	.16	b	.14	b	c	c	c	c
PVT66	1 = Private sector employee								
	0 = Government employee	.81	b	.78	b	c	c	c	c
RACE	1 = Black								
	0 = White	c	c	c	c	.08	b	.08	b
AGE	Years	55.4	4.0	55.3	3.9	55.4	4.0	55.5	4.3
MKTSIZ	10,000 Persons	63.5	105.0	98.0	129.3	67.9	126.7	77.3	123.9
UNRATE	Percentage	5.3	1.8	5.0	1.2	5.1	1.7	5.3	1.9
INDDIV	Ordinal index	15.6	6.2	15.5	7.1	16.8	6.8	18.2	8.5
Number of respondents		288		121		115		83	

(Table continued on next page.)

Table 4A-4 Continued

- a Respondents 50 to 64 years of age in 1971 who were not retired in 1966 or 1971, nonmigrants between 1966 and 1971, employed wage and salary workers in 1966 and 1971, and who changed occupations between 1966 and 1971.
- b The standard deviation of a binary variable is $\sqrt{p(1-p)}$ where p is the proportion of cases with the requisite trait. Therefore, it can be computed from the number shown in the $\bar{X}$ column.
- c Variable is not applicable to this group.

Table 4A-5 Regressions Relating Relative Increase in Hourly Earnings 1966-1971 and Changes in Job Satisfaction 1966-1971 to Occupational Mobility 1966-1971 and Other Selected Variables for Respondents Who Did Not Change Employers 1966-1971^a

(t-ratios)

(Coefficients shown in percentage points)

Explanatory variable ^b	Relative change in hourly earnings ^c	Proportion more satisfied ^d	Proportion less satisfied ^e
MOBUP	5.2 (2.41)***	1.8 (0.85)	- 5.7 (- 1.82)**
MOBDWN	1.3 (0.51)	- 4.5 (- 1.92)**	10.1 (2.79)***
OCC66	0.3 (5.63)***	0.1 (2.27)**	- 0.3 (- 4.04)***
EDUC	0.3 (0.93)	0.2 (0.61)	- 0.4 (- 0.94)
TRN66	- 0.5 (- 0.28)	- 1.7 (- 0.97)	- 2.3 (- 0.87)
TRN71	5.2 (1.34)*	- 4.5 (- 1.21)	0.0 (0.00)
TRNBTH	5.7 (2.34)***	- 0.5 (- 0.22)	- 4.9 (- 1.37)*
HEALTH	2.3 (1.08)	2.2 (1.07)	2.7 (0.87)
TENURE	0.0 (0.31)	- 0.3 (- 3.49)***	0.2 (1.36)*
MSP71	0.7 (0.24)	- 3.0 (- 1.11)	- 3.1 (- 0.76)
PVT66	-10.9 (- 5.64)***	- 2.2 (- 1.21)	- 6.2 (- 2.17)**
AGE	- 0.1 (- 0.61)	0.4 (2.10)**	- 0.6 (- 2.15)**
RACE	2.2 (0.77)	8.0 (2.94)***	- 11.1 (- 2.69)***
MKTSIZ	0.01 (2.12)**	- 0.0 (- 1.03)	0.01 (1.25)
UNRATE	0.01 (1.52)	0.01 (2.71)***	0.0 (0.85)
INDDIV ^f	- 0.2 (- 1.39)*	0.0 (0.06)	0.2 (0.96)
WAGE66 ^g	- 6.9 (-11.69)***	h	h
SAT66 ^g	h	28.8 (24.72)***	- 24.9 (-13.97)***
Constant	61.7 (5.40)***	-52.2 (- 4.61)***	108.0 (6.23)***
$\bar{R}^2$	.118	.310	.131
F-ratio	12.32	39.10	13.78
Number of respondents	1,444	1,444	1,444

a Respondents 50 to 64 years old in 1971 who (1) were not retired in 1966 or 1971, (2) were not migrants between 1966 and 1971, and (3) were employed wage and salary workers in 1966 and 1971.

b For a detailed description of the explanatory variables see text pp. 129-131. For ease of reading, all regression coefficients have been multiplied by 100.

(Table continued on next page.)

Table 4A-5 Continued

- c The dependent variable is defined as the ratio of 1971 hourly earnings to 1966 hourly earnings minus 1. The mean and standard deviation of the variable for this sample are .432 and .307.
 - d The dependent variable is dichotomous and assumes the value 1 if the satisfaction score is lower in 1971 than in 1966, and 0 otherwise. The mean value for this sample is .127.
 - e The dependent variable is dichotomous and assumes the value 1 if the satisfaction score is higher in 1971 than in 1966, and 0 otherwise. The mean value for the sample is .291.
 - f The variable is the average hourly earnings on the 1966 job, denominated in dollars. The mean and standard deviation of the variable for this sample are 3.48 and 1.72.
 - g The variable is the score on a four-valued scale of job satisfaction reported in 1966, where 1 = like very much and 4 = dislike very much. The mean and standard deviation of the variable for this sample are 1.5 and 0.6.
 - h Variable does not enter this equation.
- *** Significant at $\alpha \leq .01$.
** Significant at $\alpha \leq .05$.
* Significant at $\alpha \leq .10$.

Table 4A-6 Regressions Relating Relative Increase in Hourly Earnings 1966-1971 and Changes in Job Satisfaction 1966-1971 to Occupational Mobility 1966-1971 and Other Selected Variables for Respondents Who Changed Employers 1966-1971^a

(t-ratios)

(Coefficients shown in percentage points)

Explanatory variable ^b	Relative change in hourly earnings ^c	Proportion more satisfied ^d	Proportion less satisfied ^e
MOBUP	11.2 (1.86)**	- 0.3 (- 0.07)	5.5 (0.90)
MOBDWN	- 2.8 (-0.46)	- 1.8 (- 0.39)	5.5 (0.91)
OCC66	- 0.1 (-0.66)	0.0 (0.17)	0.0 (0.33)
EDUC	0.3 (0.29)	1.0 (1.17)	- 0.6 (-0.57)
TRN66	- 8.4 (-1.43)	3.8 (0.82)	- 0.3 (-0.05)
TRN71	5.3 (0.53)	5.1 (0.65)	- 4.7 (-0.47)
TRNBTH	- 0.7 (-0.08)	- 7.6 (- 1.10)	17.0 (1.90)
HEALTH	3.6 (0.55)	- 2.4 (- 0.46)	- 6.5 (-0.96)
TENURE	0.6 (0.47)	- 0.7 (- 0.87)	0.1 (0.10)
MSP71	24.2 (2.81)***	6.2 (0.91)	1.0 (0.11)
VOLUNT	0.6 (0.12)	- 0.1 (- 0.02)	- 1.4 (-0.28)
AGE	0.4 (0.57)	0.7 (1.42)*	0.3 (0.47)
RACE	- 1.2 (-0.13)	10.8 (1.39)*	- 6.1 (-0.62)
MKTSIZ	0.0 (0.01)	0.04 (2.35)***	-0.03 (-1.48)*
UNRATE	-0.04 (-2.34)***	0.0 (0.75)	- 0.0 (-0.31)
INDDIV ^f	- 1.1 (-2.94)***	0.4 (1.35)	0.1 (0.32)
WAGE66 ^f	-10.0 (-4.61)***	h	h
SAT66 ^g	h	35.1 (13.12)***	-24.8 (-7.22)**
Constant	67.1 (1.78)**	-96.8 (- 3.21)***	62.2 (1.61)*
$\bar{R}^2$	.132	.372	.138
F-ratio	3.75	11.70	3.90
Number of respondents	308	308	308

a Respondents 50 to 64 years old in 1971 who (1) were not retired in 1966 or 1971, (2) were not migrants between 1966 and 1971, and (3) were employed wage and salary workers in 1966 and 1971.

b For a detailed description of the explanatory variables see text pp. 129-131. For ease of reading all regression coefficients have been multiplied by 100.

(Table continued on next page.)

Table 4A-6 Continued

- c The dependent variable is defined as the ratio of 1971 hourly earnings to 1966 hourly earnings minus 1. The mean and standard deviation of the variable for the sample are .427 and .448.
 - d The dependent variable is dichotomous and assumes the value 1 if the satisfaction score is lower in 1971 than in 1966, and 0 otherwise. The mean value for this sample is .224.
 - e The dependent variable is dichotomous and assumes the value 1 if the satisfaction score is higher in 1971 than in 1966, and 0 otherwise. The mean value for the sample is .297.
 - f The variable is average hourly earnings in the 1966 job, denominated in dollars. The mean and standard deviation of the variable for the sample are 3.07 and 1.46.
 - g The variable is the score on a four-valued scale of job satisfaction reported in 1966, where 1 = like very much and 4 = dislike very much. The mean and standard deviation of the variable for this sample are 1.6 and 0.7.
 - h Variable does not enter this equation.
- *** Significant at $\alpha \leq .01$.
** Significant at $\alpha \leq .05$.
* Significant at $\alpha \leq .10$.

Table 5A-1 Annual Income from Selected Sources in 1970: White Respondents
Already Retired in 1969, by Marital Status and Age

(Percentage distributions)

Age and income source	Married, spouse present						
	Number of retirees	Total percent	None	Under \$1,000	\$1,000- 2,999	\$3,000- 4,999	\$5,000 or more
<u>Total, all ages</u>							
Wage and salary income	150	100	97	1	2	0	0
Self employment income	150	100	98	2	0	0	0
Earnings of wife	150	100	68	3	7	14	7
Pension	150	100	76	4	11	4	4
Social security retirement ^a	150	100	81	8	12	0	0
Disability benefits ^b	150	100	30	5	47	13	4
Welfare ^c	150	100	94	3	2	0	1
<u>50-59</u>							
Wage and salary income	59	100	98	2	0	0	0
Self employment income	59	100	97	3	0	0	0
Earnings of wife	59	100	61	5	5	19	10
Pension	59	100	80	5	11	3	2
Social security retirement ^a	59	100	100	0	0	0	0
Disability benefits ^b	59	100	19	5	47	20	10
Welfare ^a	59	100	91	3	6	0	0
<u>60-64</u>							
Wage and salary income	91	100	96	1	3	0	0
Self employment income	91	100	98	2	0	0	0
Earnings of wife	91	100	73	2	9	0	6
Pension	91	100	74	4	12	4	6
Social security retirement ^a	91	100	68	12	20	0	0
Disability benefits ^b	91	100	37	6	48	9	1
Welfare ^a	91	100	97	2	0	0	1

Continued on next page.

Table 5A-1 continued.

Age and income source	Total, all marital status categories						
	Number of retirees	Total percent	None	Under \$1,000	\$1,000-2,999	\$3,000-4,999	\$5,000 or more
<u>Total, all ages</u>							
Wage and salary income	190	100	96	2	2	0	0
Self employment income	190	100	98	2	0	0	0
Earnings of wife	---	---	--	-	-	-	-
Pension	190	100	78	5	10	4	3
Social security retirement ^a	190	100	80	8	13	0	0
Disability benefits ^b	190	100	36	7	42	11	4
Welfare ^c	190	100	93	4	3	0	0
<u>50-59</u>							
Wage and salary income	79	100	98	2	0	0	0
Self employment income	79	100	98	2	0	0	0
Earnings of wife	---	---	--	-	-	-	-
Pension	79	100	82	4	9	4	1
Social security retirement ^a	79	100	99	0	1	0	0
Disability benefits ^b	79	100	27	5	42	18	9
Welfare ^a	79	100	90	5	5	0	0
<u>60-64</u>							
Wage and salary income	111	100	96	2	3	0	0
Self employment income	111	100	98	2	0	0	0
Earnings of wife	---	---	--	-	-	-	-
Pension	111	100	75	6	11	4	5
Social security retirement ^a	111	100	66	13	21	0	0
Disability benefits ^b	111	100	42	8	42	7	1
Welfare ^a	111	100	95	3	2	0	1

a Includes payments to wife.

b Includes "income as a result of disability or illness, such as (1) veteran's compensation or pension, (2) workmen's compensation, (3) aid to the permanently and totally disabled, or aid to the blind, (4) Social Security Disability payment, and (5) any other disability payment."

c Other than payments deriving from the categorical programs related to disability.

Table 5A-2 Annual Income from Selected Sources in 1970: Black Respondents
Already Retired in 1969, by Marital Status and Age

(Percentage distributions)

Age and income source	Married, spouse present						
	Number of retirees	Total percent	None	Under \$1,000	\$1,000- 2,999	\$3,000- 4,999	\$5,000 or more
<u>Total, all ages</u>							
Wage and salary income	67	100	98	2	0	0	0
Self employment income	67	100	100	0	0	0	0
Earnings of wife	67	100	66	10	13	1	10
Pension	67	100	83	4	12	1	0
Social security retirement ^a	67	100	84	8	3	6	0
Disability benefits ^b	67	100	26	14	42	17	1
Welfare ^c	67	100	80	12	7	2	0
<u>50-59</u>							
Wage and salary income	33	100	100	0	0	0	0
Self employment income	33	100	100	0	0	0	0
Earnings of wife	33	100	68	6	18	3	6
Pension	33	100	89	0	8	3	0
Social security retirement ^a	33	100	89	11	0	0	0
Disability benefits ^b	33	100	22	18	42	17	0
Welfare ^a	33	100	67	19	11	3	0
<u>60-64</u>							
Wage and salary income	34	100	95	5	0	0	0
Self employment income	34	100	100	0	0	0	0
Earnings of wife	34	100	63	15	8	0	14
Pension	34	100	76	8	16	0	0
Social security retirement ^a	34	100	77	5	6	12	0
Disability benefits ^b	34	100	30	10	41	16	3
Welfare ^a	34	100	92	5	2	0	0

Continued on next page.

Table 5A-2 continued.

Age and income source	Total, all marital status categories						
	Number of retirees	Total percent	None	Under \$1,000	\$1,000-2,999	\$3,000-4,999	\$5,000 or more
<u>Total, all ages</u>							
Wage and salary income	103	100	96	2	2	1	0
Self employment income	103	100	100	0	0	0	0
Earnings of wife	---	---	--	-	-	-	-
Pension	103	100	87	3	9	1	0
Social security retirement ^a	103	100	88	6	3	4	0
Disability benefits ^b	103	100	23	19	43	14	1
Welfare ^c	103	100	73	17	6	2	1
<u>50-59</u>							
Wage and salary income	52	100	98	0	0	2	0
Self employment income	52	100	100	0	0	0	0
Earnings of wife	--	---	--	-	-	-	-
Pension	52	100	93	0	5	2	0
Social security retirement ^a	52	100	93	7	0	0	0
Disability benefits ^b	52	100	18	21	43	17	0
Welfare ^a	52	100	62	24	8	4	2
<u>60-64</u>							
Wage and salary income	51	100	93	3	4	0	0
Self employment income	51	100	100	0	0	0	0
Earnings of wife	--	---	--	-	-	-	-
Pension	51	100	81	7	12	0	0
Social security retirement ^a	51	100	82	5	6	8	0
Disability benefits ^b	51	100	28	17	43	11	2
Welfare ^a	51	100	85	10	5	0	0

a Includes payments to wife.

b Includes "income as a result of disability or illness, such as (1) veteran's compensation or pension, (2) workmen's compensation, (3) aid to the permanently and totally disabled, or aid to the blind, (4) Social Security Disability payment, and (5) any other disability payment."

c Other than payments deriving from the categorical programs related to disability.

Table 5A-3 Total Family Income in 1970: All Respondents and Selected Categories of Retirees, by Race
(Percentage distributions)

Total family income	All respondents	Retirees				
		Total ^a	Married, wife present	Nonmarried ^b	ERA under 65 ^c	ERA other ^d
WHITES						
Number of respondents	2,953	190	150	40	28	82
Total percent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Under \$1,000	2	6	6	6	5	3
\$1,000-1,999	2	11	6	29	5	16
2,000-2,999	3	14	11	23	5	11
3,000-3,999	4	14	15	12	11	16
4,000-4,999	4	14	14	12	0	15
5,000-5,999	4	7	9	0	5	5
6,000-6,999	5	8	10	0	26	5
7,000-7,999	6	7	8	3	16	7
8,000-9,999	13	7	8	3	16	6
10,000-14,999	28	8	9	6	5	8
15,000 and over	30	5	5	6	5	9
Median	\$11,250 ^f	\$4,254	\$4,909	\$2,690	\$6,528	\$4,098
BLACKS						
Number of respondents	1,159	103	67	36	8	40
Total percent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Under \$1,000	4	14	13	1	e	18
\$1,000-1,999	6	15	7	29	e	9
2,000-2,999	7	15	16	12	e	18
3,000-3,999	9	14	14	12	e	18
4,000-4,999	10	10	17	0	e	6
5,000-5,999	7	10	8	13	e	6
6,000-6,999	8	7	9	3	e	6
7,000-7,999	8	2	4	0	e	0
8,000-9,999	16	3	4	3	e	3
10,000-14,999	16	6	2	12	e	6
15,000 and over	8	4	6	0	e	10
Median	\$6,875 ^f	\$3,167	\$3,804	\$2,693	e	\$3,024

a Respondents already retired at time of 1969 survey.

b All marital status categories except married, spouse present.

c Respondents who in 1966 were not yet retired and who reported that they expected to retire at some age earlier than 65.

d Respondents who in 1966 were not yet retired and who did not report an expectation of retiring prior to age 65.

e Percentages and median not shown where base is fewer than 25 sample cases.

f Computed from grouped data.

Table 6A-1 Regressions Relating 1969 Occupational Status, Average Hourly Earnings, and Job Satisfaction to 1969 Internal-External Control and Other Selected Explanatory Variables, by Race^a

(t-ratios)

Explanatory variables	Occupational status, 1969		Average hourly earnings, 1969		Job satisfaction, 1969	
	Whites	Blacks	Whites	Blacks	Whites	Blacks
Internal-external control, 1969	- 0.5 (- 4.52)***	- 0.1 (- 0.83)	- 0.03 (- 3.60)***	- 0.01 (- 1.32)*	- 1.7 (- 6.50)***	- 0.3 (- 0.74)
Years of schooling, 9-11	5.1 (3.14)***	5.4 (2.95)***	0.28 (2.13)**	0.01 (0.12)	1.3 (0.32)	- 8.8 (- 1.32)
Years of schooling, 12	13.1 (8.41)***	10.3 (4.92)***	0.58 (4.50)***	0.12 (0.91)	7.6 (1.90)**	-14.1 (- 1.84)
Years of schooling, 13+	32.8 (18.55)***	23.6 (6.92)***	2.14 (14.74)***	0.54 (2.59)***	10.0 (2.21)**	- 7.5 (- 0.61)
Received training, 1966-1969	7.5 (4.83)***	5.5 (2.38)***	0.29 (2.26)***	0.53 (3.73)***	7.2 (1.82)**	24.2 (2.89)***
Good health, 1969	2.2 (1.42)*	1.6 (0.82)	0.27 (2.19)**	- 0.10 (- 0.85)	2.3 (0.59)	12.3 (1.72)**
Tenure, 1969	0.2 (1.62)***	0.3 (0.40)	0.03 (6.31)***	0.01 (3.47)***	- 0.1 (- 0.65)	0.1 (0.52)
Age, 55-59	0.2 (0.16)	- 2.5 (- 1.61)*	- 0.18 (- 1.68)**	- 0.24 (- 2.45)***	- 1.0 (- 0.31)	1.5 (0.27)
Age, 60-64	- 0.6 (- 0.37)	- 2.7 (- 1.30)*	- 0.20 (- 1.54)*	- 0.25 (- 1.95)**	10.6 (2.65)	10.2 (1.37)
Married spouse present, 1969	5.9 (2.69)***	2.8 (1.55)*	0.58 (3.22)***	0.16 (1.44)*	13.0 (2.32)**	- 8.0 (- 1.23)
Non-South, 1969	- 3.7 (- 2.68)	1.7 (0.99)	0.25 (2.21)**	0.65 (6.15)***	- 6.3 (- 1.81)	- 1.8 (- 0.29)
Medium-size city, 1969	3.7 (2.48)***	0.7 (0.39)	0.48 (3.89)***	0.48 (4.36)***	3.1 (0.80)	15.5 (2.37)***
Large city, 1969	1.1 (0.74)	- 1.0 (- 0.51)	0.53 (4.45)***	0.54 (4.55)***	- 2.9 (- 0.78)	- 1.2 (- 0.17)
Constant	30.1 (7.71)	15.5 (3.55)	2.77 (8.65)	2.38 (8.85)	75.0 (7.53)	57.3 (3.63)

(Table continued on next page.)

Table 6A-1 Continued

Explanatory variables	Occupational status, 1969		Average hourly earnings, 1969		Job satisfaction, 1969	
	Whites	Blacks	Whites	Blacks	Whites	Blacks
$\bar{R}^2$	0.354	0.201	0.293	0.321	0.067	0.035
F-ratio	47.09	8.48	35.87	15.03	7.00	2.09
Number of sample cases	1,096	387	1,096	387	1,096	387

a Respondents 50 to 64 years of age in 1971 who were employed full time as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. For a complete description of all variables and their units of measurement, see text or Glossary.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 6A-2 Regressions Relating 1971 Occupational Status, Average Hourly Earnings, and Job Satisfaction to 1971 Internal-External Control and to Other Selected Explanatory Variables, by Race^a

(t-ratios)

Explanatory variables	Occupational status, 1971		Average hourly earnings, 1971		Job satisfaction 1971	
	Whites	Blacks	Whites	Blacks	Whites	Blacks
Internal-external control, 1971	- 0.5 (- 4.55)***	0.1 (0.88)	- 0.04 (- 3.62)***	- 0.02 (- 2.52)***	- 1.1 (- 4.40)***	0.2 (0.43)
Years of schooling, 9-11	3.9 (2.37)***	2.2 (1.08)	0.25 (1.56)*	- 0.12 (- 0.95)	0.8 (0.20)	- 6.3 (- 0.94)
Years of schooling, 12	14.3 (9.13)***	12.1 (5.20)***	0.81 (5.34)***	0.05 (0.36)	5.6 (1.42)*	- 7.7 (- 1.00)
Years of schooling, 13+	31.6 (17.38)***	20.7 (5.60)***	2.43 (13.86)***	0.51 (2.12)**	23.6 (5.19)***	18.4 (1.49)*
Received training, 1966-1971	5.8 (4.00)***	6.6 (2.98)***	0.49 (3.47)***	0.65 (4.53)***	2.1 (0.57)	6.5 (0.88)
Good health, 1971	0.6 (0.41)	- 0.4 (- 0.19)	0.22 (1.46)*	- 0.06 (- 0.39)	1.2 (0.30)	16.9 (2.21)**
Tenure, 1971	0.3 (5.42)***	0.3 (3.76)***	0.03 (6.35)***	0.03 (5.82)***	0.5 (- 0.37)	- 0.2 (- 0.60)
Age, 55-59	0.6 (0.46)	- 2.3 (- 1.32)*	- 0.03 (- 0.25)	- 0.42 (- 3.73)***	4.0 (1.21)	2.0 (0.35)
Age, 60-64	- 0.5 (- 0.29)	- 1.9 (- 0.83)	- 0.16 (- 1.02)	- 0.44 (- 2.98)***	5.4 (1.34)	23.2 (3.07)
Married spouse present, 1971	3.6 (1.66)**	- 1.0 (- 0.52)	0.45 (2.19)**	0.06 (0.50)	- 1.51 (- 0.28)	1.9 (0.29)
Non-South, 1971	- 4.5 (- 3.21)	- 0.5 (- 0.27)	0.30 (2.23)**	0.83 (7.01)***	- 5.0 (- 1.44)	17.2 (2.80)***
Medium-size city, 1971	5.1 (3.32)***	- 0.1 (- 0.04)	0.60 (4.00)***	0.50 (3.95)***	5.8 (1.51)*	6.0 (0.92)

(Table continued on next page.)

Table 6A-2 Continued

Explanatory variables	Occupational status, 1971		Average hourly earnings, 1971		Job satisfaction, 1971	
	Whites	Blacks	Whites	Blacks	Whites	Blacks
Large city, 1971	1.4 (0.94)	0.6 (0.29)	0.67 (4.80)***	0.53 (3.97)***	1.5 (0.43)	-11.6 (- 1.69)
Constant	32.4 (8.44)	11.6 (2.34)	3.19 (8.60)	2.89 (9.04)	61.7 (6.43)	24.5 (1.48)
$\bar{R}^2$	0.336	0.181	0.283	0.370	0.047	0.046
F-ratio	43.65	7.55	34.32	18.42	5.17	2.42
Number of sample cases	1,096	387	1,096	387	1,096	387

a Respondents 50 to 64 years of age in 1971 who were employed full time as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. For a complete description of all variables and their units of measurement, see text or Glossary.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 6A-3 Regressions Relating Annual Earnings 1970, Perceived Financial Progress 1969-1971, and Unemployment 1969-1971 to Internal-External Control in 1969 and to Other Selected Explanatory Variables, by Race^a

(t-ratios)

Explanatory variables	Annual earnings, 1970		Perceived financial progress 1969-1971		Unemployment, 1969-1971	
	Whites	Blacks	Whites	Blacks	Whites	Blacks
Internal-external control, 1969	- 91 (- 3.99)***	- 93 (- 4.06)***	- 0.9 (- 3.49)***	- 0.3 (- 0.76)	- 0.2 (- 1.23)	0.4 (1.71)**
Years of schooling, 9-11	551 (1.55)*	- 16 (- 0.05)	- 2.5 (- 0.59)	2.5 (0.37)	2.0 (0.87)	- 2.0 (- 0.59)
Years of schooling, 12	1,982 (5.80)***	781 (2.05)***	8.7 (2.17)**	13.0 (1.71)**	2.7 (1.25)	- 0.6 (- 0.16)
Years of schooling, 13+	6,117 (15.74)***	1,664 (2.70)***	7.3 (1.57)*	7.0 (0.57)	0.5 (0.22)	- 7.4 (- 1.22)
Received training, 1966-1969	877 (2.57)***	1,017 (2.43)***	8.8 (2.35)***	- 0.3 (- 0.04)	- 5.0 (- 2.33)***	1.8 (0.44)
Good health, 1969	1,255 (3.75)***	122 (0.34)	5.3 (1.32)*	12.3 (1.61)*	- 3.1 (- 1.45)	0.1 (0.02)
Tenure, 1969	82 (7.22)***	17 (1.40)*	0.2 (1.53)*	0.3 (1.23)	- 0.5 (- 6.41)***	- 0.4 (- 3.09)***
Age, 55-59	- 416 (- 1.44)*	- 662 (- 2.33)***	1.0 (0.30)	- 1.4 (- 0.25)	0.7 (0.36)	5.4 (1.93)**
Age, 60-64	- 590 (- 1.71)**	- 300 (- 0.80)	- 2.2 (- 0.55)	- 1.3 (- 0.17)	- 2.4 (- 1.11)	- 4.1 (- 1.10)
Married spouse present, 1969	1,681 (3.49)***	303 (0.94)	9.3 (1.70)**	0.3 (0.05)	- 7.9 (- 2.61)***	0.6 (0.19)
Non-South, 1969	424 (1.42)*	1,819 (5.89)***	- 2.6 (- 0.73)	- 2.4 (- 0.39)	- 1.2 (- 0.65)	- 0.2 (- 0.06)
Medium sized city, 1969	1,091 (3.30)***	963 (2.96)***	2.1 (0.54)	7.7 (1.17)	- 2.4 (- 1.13)	- 1.6 (- 0.51)

(Table continued on next page.)

Table 6A-3 Continued

Explanatory variables	Annual earnings, 1970		Perceived financial progress 1969-1971		Unemployment, 1969-1971	
	Whites	Blacks	Whites	Blacks	Whites	Blacks
Large city, 1969	1,264	873	- 3.5	-10.1	- 1.1	- 0.4
	(4.01)***	(2.52)***	(- 0.94)	(- 1.47)	(- 0.56)	(- 0.12)
Constant	6,063	7,307	53.0	32.5	29.5	0.8
	(7.07)	(9.26)	(5.20)	(1.96)	(5.44)	(0.10)
$\bar{R}^2$	0.330	0.269	0.034	0.007	0.048	0.027
F-ratio	42.41	11.92	3.99	1.22	5.22	1.83
Number of sample cases	1,096	387	1,096	387	1,096	387

a Respondents 50 to 64 years of age in 1971 who were employed full time as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. For a complete description of all variables and their units of measurement, see text or Glossary.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 6A-4 Regressions Relating Changes in Occupational Status, Average Hourly Earnings, Job Satisfaction, and Annual Earnings to Internal-External Control in 1969 and to Other Selected Explanatory Variables, by Race^a

(t-ratios)

Explanatory variables	Change in occupational status, 1969-1971 ^c		Change in average hourly earnings, 1969-1971		Change in job satisfaction, 1969-1971		Change in annual earnings, 1968-1970 ^d	
	Whites	Blacks	Whites	Blacks	Whites	Blacks	Whites	Blacks
Internal-external control, 1969	-0.05 (-0.77)	0.19 (1.89)	0.01 (1.18)	-0.01 (-1.37)*	-0.01 (-1.79)**	-0.01 (-1.38)*	-99 (-2.81)***	-44 (-2.58)***
Years of schooling, 9-11	-0.29 (-0.31)	-1.87 (-1.30)	-0.05 (-0.67)	-0.08 (-1.00)	-0.04 (-0.66)	-0.05 (-0.72)	-481 (-0.87)	-49 (-0.20)
Years of schooling, 12	2.44 (2.66)***	3.11 (1.83)**	0.18 (2.42)***	0.04 (0.41)	-0.02 (-0.32)	-0.14 (-1.69)	88 (0.16)	79 (0.28)
Years of schooling, 13+	4.07 (3.49)***	2.16 (0.77)	0.23 (2.50)***	0.02 (0.11)	0.17 (2.92)***	0.15 (1.11)	1,145 (1.77)**	193 (0.42)
Received training, 1966-1969	1.01 (1.12)	0.48 (0.26)	0.09 (1.28)*	0.09 (0.88)	-0.04 (-0.77)	0.12 (1.29)*	1,556 (2.94)***	482 (1.55)*
Good health, 1969	0.06 (0.07)	-1.43 (-0.93)	0.03 (0.04)	0.01 (0.10)	-0.03 (-0.63)	0.27 (3.60)***	326 (0.63)	55 (0.21)
Tenure, 1969	0.08 (2.62)***	0.04 (0.85)	0.003 (1.38)*	0.00 (-0.04)	-0.01 (-0.08)	-0.03 (-1.15)	53 (2.90)***	-12 (-1.28)
Age, 55-59	-0.41 (-0.55)	-0.48 (-0.39)	0.11 (1.81)	-0.17 (-2.38)***	0.03 (0.71)	-0.03 (-0.05)	51 (0.12)	-140 (-0.66)
Age, 60-64	0.65 (0.71)	0.48 (0.30)	0.06 (0.85)	-0.15 (-1.66)**	-0.01 (-0.01)	0.22 (2.73)	-187 (-0.35)	66 (0.23)

(Table continued on next page.)

Table 6A-4 Continued

Explanatory variables	Change in occupational status, 1965-1971 ^c		Change in average hourly earnings, 1969-1971		Change in job satisfaction, 1969-1971		Change in annual earnings, 1968-1970 ^d	
	Whites	Blacks	Whites	Blacks	Whites	Blacks	Whites	Blacks
Married spouse present, 1969	-1.26 (-0.99)	0.10 (0.08)	-0.07 (-0.66)	-0.06 (-0.79)	0.00 (-0.01)	-0.07 (-1.06)	284 (0.38)	84 (0.35)
Non-South, 1969	-2.14 (-2.72)	-2.43 (-1.79)	0.03 (0.46)	0.23 (2.88)***	-0.02 (-0.35)	0.18 (2.75)***	68 (0.15)	724 (3.06)***
Medium-sized city, 1969	1.32 (1.54)*	-0.98 (-0.69)	0.07 (0.98)	0.09 (1.15)	0.03 (0.52)	0.04 (0.50)	108 (0.21)	330 (1.35)*
Large city, 1969	-0.24 (-0.30)	1.36 (0.90)	0.08 (1.21)	-0.02 (-0.26)	0.04 (0.94)	-0.15 (-1.99)	130 (0.27)	-197 (-0.75)
Occupational status, 1969	-0.16 (-9.03)	-0.21 (-5.19)	b	b	b	b	b	b
Average hourly earnings, 1969	b	b	0.06 (3.49)	-0.04 ⁺ (-1.07)	b	b	b	b
Job satisfaction, 1969	b	b			-0.01 (-16.20)	-0.01 (-14.31)	b	b
Annual earnings, 1968	b	b	b	b	b	b	-0.3 (-7.08)	-0.2 (-4.70)

(Table continued on next page.)

Table 6A-4 Continued

Explanatory variables	Change in occupational status, 1969-1971 ^c		Change in average hourly earnings, 1969-1971		Change in job satisfaction, 1969-1971		Change in annual earnings, 1968-1970 ^d	
	Whites	Blacks	Whites	Blacks	Whites	Blacks	Whites	Blacks
Constant	7.67 (3.34)	1.59 (0.46)	0.03 (0.17)	0.76 (3.57)	0.33 (2.52)	0.37 (2.14)	4.553 (3.38)	2.736 (4.29)
χ^2	0.076	0.093	0.044	0.020	0.199	0.365	0.047	0.061
R	7.07	3.66	4.63	1.55	20.48	16.86	4.76	2.79
F-ratio								
Number of sample cases	1,030	366	1,096	387	1,096	387	1,079	385

a Respondents 50 to 64 years of age in 1971 who were employed full time as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. For a complete description of all variables and their units of measurement, see text or Glossary.

b Variable did not enter equation.

c Sixty-six whites and 21 blacks have been excluded from the universe based on the decision logic outlined in Chapter IV for the elimination of occupational movement with a high probability of measurement error.

d Seventeen whites and two blacks have been excluded from the universe because of incomplete information on annual earnings in 1968.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

Table 6A-5 Regressions Relating Changes in Occupational Status, Average Hourly Earnings, Job Satisfaction, and Annual Earnings to Internal-External Control in 1969 and to Other Selected Explanatory Variables, by Race: Same Employer 1969 and 1971^a

(t-ratios)

Explanatory variables	Change in occupational status, 1969-1971 ^c		Change in average hourly earnings, 1969-1971		Change in job satisfaction, 1969-1971		Change in annual earnings, 1968-1970 ^d	
	Whites	Blacks	Whites	Blacks	Whites	Blacks	Whites	Blacks
Internal-external control, 1969	-0.02 (-0.35)	0.17 (1.66)	0.01 (1.15)	-0.01 (-1.01)	-0.01 (-2.11)***	-0.05 (-0.97)	-109 (-2.80)***	-34 (-2.05)**
Years of schooling, 9-11	0.08 (0.08)	-2.05 (-1.39)	-0.03 (-0.39)	-0.09 (-1.15)	-0.04 (-0.83)	-0.04 (-0.61)	-655 (-1.09)	-86 (-0.36)
Years of schooling, 12	2.89 (3.05)***	3.96 (2.28)**	0.21 (2.72)***	0.01 (0.08)	-0.04 (-0.68)	-0.31 (-1.53)	25 (0.04)	14 (0.05)
Years of schooling, 13+	4.24 (3.55)***	2.17 (0.77)	0.29 (3.14)***	-0.02 (-1.15)	0.18 (3.04)***	0.15 (1.17)	1,078 (1.52)*	46 (0.11)
Received training, 1966-1969	1.07 (1.18)	-0.86 (-0.45)	0.08 (1.03)	0.09 (0.81)	-0.05 (-0.95)	0.16 (1.76)**	1,704 (2.98)***	512 (1.66)**
Good health, 1969	0.05 (0.06)	-1.43 (-0.91)	0.02 (0.29)	0.02 (0.19)	-0.04 (-0.85)	0.31 (3.93)***	205 (0.36)	84 (0.32)
Tenure, 1969	0.08 (2.48)***	0.05 (1.01)	0.03 (1.08)	-0.03 (-0.01)	-0.01 (-0.49)	-0.03 (-1.00)	57 (2.86)***	-11 (-1.23)
Age, 55-59	-0.67 (-0.86)	-0.62 (-0.49)	0.10 (1.55)	-0.10 (-1.44)*	0.03 (0.59)	0.01 (0.12)	4 (0.01)	79 (0.38)
Age, 60-64	0.30 (0.33)	0.45 (0.28)	0.04 (0.55)	-0.13 (-1.34)*	0.02 (0.04)	0.27 (3.28)	-316 (-0.54)	172 (0.63)

(Table continued on next page.)

Table 6A-5 Continued

Explanatory variables	Change in occupational status, 1969-1971 ^c		Change in average hourly earnings, 1969-1971		Change in job satisfaction, 1969-1971		Change in annual earnings, ^d 1968-1970 ^d	
	Whites	Blacks	Whites	Blacks	Whites	Blacks	Whites	Blacks
Married spouse present, 1969	-1.76 (-1.28)	-0.12 (-0.08)	-0.02 (-0.03)	-0.03 (-0.34)	0.09 (1.17)	- 0.05 (- 0.74)	278 (0.32)	174 (0.74)
Non-South, 1969	-1.78 (-2.19)	-3.07 (-2.16)	-0.00 (-0.03)	0.15 (1.81)**	- 0.03 (- 0.66)	0.19 (2.84)***	101 (0.20)	388 (1.67)**
Medium-sized city, 1969	1.17 (1.32)*	-0.83 (-0.57)	0.05 (0.66)	0.09 (1.05)	0.05 (0.95)	0.05 (0.71)	70 (0.12)	295 (1.24)
Large city, 1969	-0.57 (-0.68)	1.76 (1.12)	0.13 (1.83)**	0.07 (0.82)	0.04 (0.93)	- 0.14 (- 1.86)	176 (0.33)	187 (0.37)
Occupational status, 1969	-0.15 (-8.35)	-0.20 (-4.90)	b	b	b	b	b	b
Average hourly earnings, 1969	b	b	0.07 (4.00)	-0.03 (-0.77)	b	b	b	b
Job satisfaction, 1969	b	b	b	b	- 0.01 (-14.86)	- 0.01 (-13.46)	b	b
Annual earnings, 1968	b	b	b	b	b	b	-0.3 (-6.92)	-0.2 (-4.59)

(Table continued on next page.)

Table 6A-5 Continued

Explanatory variables	Change in occupational status, 1969-1971 ^c		Change in average hourly earnings, 1969-1971		Change in job satisfaction, 1969-1971		Change in annual earnings, 1968-1970 ^d	
	Whites	Blacks	Whites	Blacks	Whites	Blacks	Whites	Blacks
Constant	7.23 (2.97)	2.34 (0.66)	-0.03 (-0.14)	0.66 (3.04)	0.29 (2.10)	0.21 (1.23)	5.080 (3.33)	2.377 (3.82)
⁻² R	0.072	0.100	0.066	-0.002	0.191	0.356	0.050	0.043
F-ratio	6.10	3.71	5.93	0.95	17.40	15.13	4.64	2.16
Number of sample cases	928	342	974	359	974	359	974	359

a Respondents 50 to 64 years of age in 1971 who were employed full time as nonagricultural wage and salary workers at both the 1969 and 1971 survey dates. The universe is further restricted to those with the same employer in 1969 and 1971. For a complete description of the variables and their units of measurement, see text or Glossary.

b Variable did not enter equation.

c Forty-six whites and 17 blacks have been excluded from the universe based on the decision logic outlined in Chapter IV for the elimination of occupational movement with a high probability of measurement error.

d Seventeen whites and two blacks have been excluded from the universe because of incomplete information on annual earnings in 1968.

*** Significant at $\alpha \leq .01$.

** Significant at $\alpha \leq .05$.

* Significant at $\alpha \leq .10$.

APPENDIX B

GLOSSARY

This glossary defines all of the variables that have been used in the analysis in this volume. So far as possible, all variations in acronyms for individual variables are included. "Item numbers" refer to the interview schedules in Appendix D. References without a date are to the 1971 schedule.

APPENDIX B

GLOSSARY

AGE

Age of the respondent as of his last birthday prior to April 1, 1971.

ALTJOB

For men who did not change firms between 1966 and 1971, a binary variable indicating that the respondent received and rejected an offer of an alternative job during the five-year period (1966-1971). See item 41a. [See JOB.]

ANNUAL EARNINGS

The wage and salary income received by the respondent in the calendar year preceding the survey week. It is measured in actual dollar amounts.

ATTITUDE TOWARD JOB

The respondent's report of his feelings toward his job at the time of interview when confronted with the following four alternatives: "like it very much, like it fairly well, dislike it somewhat, dislike it very much." See item 33.

ATTITUDE TOWARD RETIREMENT

An index summarizing the respondent's attitude toward retirement, what he perceives as his wife's attitude to his retirement, the age he expects his friends to retire, and his perception of the post-retirement adjustment of friends who had retired. Each of these responses was coded by a binary variable which assumed the value "1" if the response was favorable to early retirement; otherwise it was coded "0." The codes were then summed. Respondents scoring 4 points were classified as "positive"; those scoring 3 points were coded "ambivalent"; and those with a score between 0 and 2 points were coded "negative." See items 56, 57, 60, and 61.

AVERAGE HOURLY EARNINGS

Usual gross rate of compensation per hour on job held by a wage and salary worker during survey week. If a time unit other than an hour was reported, hourly rates were computed by first converting the reported figure into a weekly rate and then dividing by the number of hours usually worked per week on the job.

BESTOC

A binary variable indicating that the respondent identified his 1966 occupation as the best one of his work life. See item 19, 1966 schedule.

CLASS OF WORKER

Wage and Salary Worker

A person working for a rate of pay per unit-time, commission, tips, payment in kind, or piece rate for a private employer or government unit.

Self-employed Worker

A person working in his own unincorporated business, profession, or trade, or operating a farm for profit or fees.

Unpaid Family Worker

A person working without pay on a farm or in a business operated by a member of the household to whom he is related by blood or marriage.

COMPARATIVE JOB STATUS

Comparative job status is based on a comparison of the employer for whom the respondent worked at two specified survey dates. Respondents are classified into two major categories: "same employer" and "different employer." The latter category is further divided according to whether the job change was voluntary or involuntary. Where a worker has several jobs between the two survey dates in question, the reason for the separation from the job held in the earlier survey week is used to classify the change as voluntary or involuntary.

DEGREE OF INDUSTRIAL DIVERSIFICATION

An index which measures the degree to which the industrial composition of the respondent's local area resembles that of the national economy. For each major industry division within the local area, the absolute difference between the percent employed in that industry and the percent employed in the same industry nationally was calculated. These differences were then summed and the total divided by two. Thus, low scores denote diversified areas and high ones denote industrially concentrated areas.

DEPENDENTS: See NUMBER OF DEPENDENTS (EXCLUDING WIFE)

DUNC

Duncan Index of occupational status. [See OCCUPATIONAL STATUS.]

DUNCAN INDEX: See OCCUPATIONAL STATUS

EDU

A comparison in 1966, for each three-digit occupation code and race group, of the years of school completed by the respondent and the mean educational attainment of all men in the sample currently employed in that occupation-race group. [See YEARS OF SCHOOL COMPLETED.]

EDUC

Actual number of years of formal schooling completed as of 1966. [See YEARS OF SCHOOL COMPLETED.]

EDUCATIONAL ATTAINMENT: See YEARS OF SCHOOL COMPLETED

ERA

The Expected Retirement Age (ERA) is the age at which the respondent reported in 1966, 1967, 1969, and 1971 that he expected to retire from his regular job. If the respondent faced a compulsory retirement plan, this age is his ERA unless he expected to retire earlier. See item 50.

EXPECTED MONTHLY PENSION INCOME

The respondent's estimate of his retirement income from company or union pension plan if he retires prior to age 65. See item 55.

FAMILY INCOME

Income from all sources (including wages and salaries, net income from business or farm, pensions, dividends, interest, rent, royalties, social insurance, and public assistance) received by any family member living in the household of the respondent in the calendar year preceding the survey week. Income of nonrelatives living in the household is not included.

HEALTH

A binary variable indicating that the respondent's health did not limit either the kind or amount of work performed in the 1966 survey week. [See HEALTH CONDITION.]

HEALTH, 1969

A binary variable indicating that the respondent's health did not limit or prevent either the kind or amount of work performed in the 1969 survey week. [See HEALTH CONDITION.]

HEALTH, 1971

A binary variable indicating that the respondent's health did not affect his work effort in the 1971 survey week. [See HEALTH CONDITION.]

HEALTH CONDITION

On the basis of respondents' assessment of whether their health or physical condition prevents them from working or limits the kind and/or amount of work they can do, they are classified into two groups: those whose health affects work and those with no health limitations affecting work. See item 66a.

HEALTH DETERIORATED

A binary variable indicating that the respondent's health did not affect his work in the 1969 survey week but affected his work in the 1971 survey week. [See HEALTH CONDITION.]

HEALTH IMPROVED

A binary variable indicating that the respondent's health affected his work in the 1969 survey week but not in the 1971 survey week. [See HEALTH CONDITION.]

IN LABOR FORCE 1969, OUT 1971

A binary variable indicating that the respondent was in the labor force in survey week 1969 but out of the labor force in survey week 1971. [See LABOR FORCE AND EMPLOYMENT STATUS.]

IND: See INDUSTRY

INDDIV

An index of the industrial diversification of the local labor market area in which the respondent resides. [See DEGREE OF INDUSTRIAL DIVERSIFICATION.]

INDUSTRY

The ten one-digit classes of the Bureau of the Census' classification of employers on the basis of nature of final product.

INTERNAL-EXTERNAL CONTROL

Internal-external control refers to the degree to which an individual perceives himself as capable of influencing his environment. "Internal control refers to the perception of positive and/or negative events as being a consequence of one's own action and thereby under personal control; external control refers to the perception of positive and/or negative events as being unrelated to one's own behavior in certain situations and therefore beyond personal control." [H. M. Lefcourt, "Internal Versus External Control of Reinforcement: A Review," Psychological Bulletin 65(1966):206.]

This variable is based on responses to an 11-item abbreviated version of Rotter's 23-item "Internal-External Control Scale." Each of the 11 responses was assigned a score from 1 to 4 in order of increasing external control. The scores were then summed and consequently ranged in value from 11 to 44 points. See item 39. Also, see Chapter 6, Appendix A, for further discussion of this scale.

INVOLUNTARY JOB CHANGE

A job separation initiated by the employer, as in a layoff, the ending of a temporary job, or a discharge. [See COMPARATIVE JOB STATUS.]

INVOLUNTARY SEPARATION

A binary variable indicating that the respondent left his 1969 survey week employer involuntarily between 1969 and 1971 interview dates. [See COMPARATIVE JOB STATUS.]

JOB

A continuous period of service with a given employer. Thus, a job change is a move from one employer to another. A change of occupation within a given firm is not included among job changes.

Current or Last Job

For respondents who were employed during the survey week, the job held during the survey week. For respondents who were either unemployed or out of the labor force, their most recent job.

JOB SATISFACTION

A binary variable indicating that the respondent was highly satisfied in his survey week job. [See ATTITUDE TOWARD JOB.]

LABOR FORCE AND EMPLOYMENT STATUS

In the Labor Force

All respondents who were either employed or unemployed during the survey week:

Employed

All respondents who during the survey week were either (1) "at work"--those who did any work for pay or profit or worked without pay for 15 hours or more on a family farm or business; or (2) "with a job but not at work"--those who did not work and were not looking for work, but had a job or business from which they were temporarily absent because of vacation, illness, industrial dispute, bad weather, or because they were taking time off for various other reasons.

Unemployed

All respondents who did not work at all during the survey week and (1) either were looking or had looked for a job in the four-week period prior to the survey; (2) were waiting to be recalled to a job from which they had been laid off; or (3) were waiting to report to a new job within 30 days.

Out of Labor Force

All respondents who were neither employed nor unemployed during the survey week.

LABOR FORCE PARTICIPATION RATE

The proportion of the total civilian noninstitutional population or of a subgroup of that population classified as "in the labor force." [See LABOR FORCE AND EMPLOYMENT STATUS.]

LARGE CITY

A binary variable indicating that the respondent resided in a local area with a labor force of 700,000 or more individuals.

LESSAT

A binary variable indicating that the respondent reported a less positive attitude toward his job in 1971 than toward his job in 1966. [See ATTITUDE TOWARD JOB.]

MARITAL STATUS

Respondents were classified into the following categories: married, spouse present; married, spouse absent; divorced; separated; widowed; and never married. When the term "married" is used in this report, it refers only to the first of these categories.

MEDIUM SIZED CITY

A binary variable indicating that the respondent resided in a local area with a labor force between 200,000 and 699,999 individuals.

MKTSIZ

A variable indicating the size (in 1960) of the civilian labor force in the local area in which the respondent resides. Measured in tens of thousands of persons.

MOBDWN

A binary variable indicating that a respondent changed occupations in the downward direction, based on the Duncan Index of Socioeconomic Status.

MOBUP

A binary variable indicating that a respondent changed occupations in an upward direction, based upon the Duncan Index of Socioeconomic Status.

MORSAT

A binary variable indicating that the respondent reported a more positive attitude toward his job in 1971 than toward his job in 1966. [See ATTITUDE TOWARD JOB.]

MSP71

A binary variable indicating that the respondent was married with spouse present in the household in 1971. [See MARITAL STATUS.]

NET ASSETS

The market value in the survey week of all family assets--real and financial--minus the value of debts outstanding.

NON-SOUTH

A binary variable indicating that the respondent's place of residence at the time of interview was in a Census region other than the South. [See REGION OF RESIDENCE.]

NUMBER OF DEPENDENTS (EXCLUDING WIFE)

The number of persons who receive at least one-half of their support from the respondent, including children, parents, and other relatives, whether or not they reside in the household. See item 100a.

OCC: See OCCUPATION

OCC66

Duncan Index of occupational status in 1966. [See OCCUPATIONAL STATUS.]

OCCUPATION

The ten occupational groups are the one-digit codes used by the Bureau of the Census in the 1960 Census.

OCCUPATIONAL STATUS

Socioeconomic status is measured by the Duncan socioeconomic index of occupations. [See Otis Dudley Duncan, "A Socioeconomic Index for All Occupations," in Albert J. Reiss, Jr. et al., Occupations and Social Status (New York: Free Press of Glencoe, 1961), pp. 109-38.] The index assigns a two-digit status score to each three-digit occupational category in the Census classification scheme. The Duncan scores range from 0 to 96, and reflect for each occupation (1) the proportion of male workers in 1950 with educational attainment of four years of high school or more and (2) the proportion of males with incomes of \$3,500 or more in 1949. Illustrative of the relation between the index score and occupation are the following examples of three-digit occupations for each ten-point interval of the Duncan index:

- 0-9 janitors and sextons; construction laborers
- 10-19 taxicab drivers and chauffeurs; carpenters
- 20-29 welders and flame cutters; plasterers
- 30-39 proprietors, gasoline service stations; salesmen and sales clerks, retail trade.
- 40-49 airplane mechanics and repairmen; policemen and detectives, government
- 50-59 railroad conductors; clergymen
- 60-69 salesmen, manufacturing; draftsmen
- 70-79 salaried managers, wholesale trade; chemists
- 80-89 pharmacists; aeronautical engineers
- 90-96 chemical engineers; physicians

OCCUPATIONAL TRAINING

In the 1966 survey, respondents were asked about training or educational programs they had ever taken "aside from regular school." For each type (e.g., business college or technical school, company training school lasting six weeks or more, armed forces, other formal vocational training, and general education) respondents were asked the kind and duration of the training and whether it was used on their current (or last) job. See items 48-53, 1966 schedule.

In subsequent surveys, respondents were asked whether they had taken any training courses or educational programs of any kind since the previous survey. If so, information was collected on kind, source, and duration of program and whether it was used on current job. See item 72.

OUT OF LABOR FORCE, 1969 AND 1971

A binary variable indicating that the respondent was not in the labor force during the 1969 and 1971 survey weeks. [See LABOR FORCE AND EMPLOYMENT STATUS.]

OUT OF LABOR FORCE 1969, IN 1971

A binary variable indicating that the respondent was not in the labor force in survey week 1969 but was in the labor force in survey week 1971. [See LABOR FORCE AND EMPLOYMENT STATUS.]

PAY

A comparison in 1966, for each three-digit occupation code and race group, of the average hourly earnings (survey week job) of the respondent and the mean average hourly earnings of all men in the sample employed in that occupation-race group. [See AVERAGE HOURLY EARNINGS.]

PER CAPITA FAMILY INCOME

Family income divided by the number of family members living in the respondent's household. [See FAMILY INCOME.]

PER CAPITA NET ASSETS

Net assets divided by the number of family members living in the respondent's household. [See NET ASSETS.]

PER CAPITA REAL NET ASSETS

Per capita net assets in 1966 and 1971 expressed in 1971 dollars using the average of the 12 monthly Consumer Price Indices for the calendar years 1966 and 1971. [See PER CAPITA NET ASSETS.]

PERCEIVED FINANCIAL PROGRESS 1969-1971

A binary variable indicating that the respondent reported that his financial position improved between the survey weeks of 1969 and 1971. See item 83.

POOR HEALTH, 1969 AND 1971

A binary variable indicating that the respondent's health affected his work during the two 1969 and 1971 survey weeks. [See HEALTH CONDITION.]

PROPENSITY TO MOVE

This construct is measured by means of a hypothetical question asked of all employed respondents both in the initial survey in 1966 and in the reinterview in 1971: "Suppose someone in this area offered you a job in the same line of work you are in now. How much would the new job have to pay for you to be willing to take it?" Each response has been expressed as a percentage of actual earnings in the current job, and the resulting figure is taken as a measure of the relative attachment of an individual to his current employer or what amounts to the same thing, of his readiness to move, given the perception of a similar job offering higher pay. See item 36a.

PSU (PRIMARY SAMPLING UNIT)

One of the 235 areas of the country from which the sample for this study was drawn; usually a SMSA (Standard Metropolitan Statistical Area) or a county.

PUBLIC SECTOR

A binary variable indicating that the respondent was working for a governmental unit as a wage and salary employee. [See CLASS OF WORKER.]

PVT66

For wage and salary workers, a binary variable indicating that the respondent was employed in the private sector.

RAC: See RACE

RACE

"Blacks" refer to Negroes, "Whites" to Caucasians. Other racial groups are excluded from all analysis in this report. When used in regressions, RACE is a binary variable indicating that the respondent is black.

REAL ANNUAL EARNINGS

Wage and salary earnings of the respondent in calendar years 1965, 1966, 1968 and 1970 expressed in 1970 dollars using the average of the 12 monthly Consumer Price Indices in each of these years. [See ANNUAL EARNINGS.]

REAL AVERAGE HOURLY EARNINGS

Average hourly earnings in survey week job expressed in August, 1971, dollars using the Consumer Price Indices for the months of June 1966, June 1967, August 1969, and August 1971. [See AVERAGE HOURLY EARNINGS.]

REAL FAMILY INCOME

Family income in 1965 and 1970 expressed in 1970 dollars using the average of the 12 monthly Consumer Price Indices for the calendar years 1965 and 1970. [See FAMILY INCOME.]

REAL NET ASSETS

Net assets in 1966 and 1971 expressed in 1971 dollars using the average of the 12 monthly Consumer Price Indices for the calendar years 1966 and 1971. [See NET ASSETS.]

REGION OF RESIDENCE

The respondent's survey week place of residence is classified into one of the following four Census regions: North, North Central, South, and West.

RETIREMENT

Two criteria of "retirement" are used in this volume (Chapter 5):

1. Declaration by the respondent, in response to a query about the age at which he expects to retire from a regular job, that he is "already retired from his regular job." See item 51a.
2. Reduction in numbers of hours in the labor force over the five-year period. By this criterion, retirees are those who (1) were in labor force for at least 3,000 hours in a 24-month period prior to the 1967 survey including (calendar year 1965 and the 12 months prior to the 1967 survey) and (2) were in the labor force for fewer than 1,000 hours in the period between 1969 and 1971 surveys.

ROTTER I-E SCALE: See INTERNAL-EXTERNAL CONTROL

SAT66

A categorical variable indicating the respondent's feelings toward his job at the time of 1966 interview. [See ATTITUDE TOWARD JOB.]

SELF-EMPLOYED

A binary variable indicating that the respondent was working in his unincorporated business, profession, or trade, or operating a farm for profit or fees. [See CLASS OF WORKER.]

SLF

A variable indicating the size (in 1960) of the civilian labor force in the local area in which respondent resides.

SURVEY WEEK

The term "survey week" denotes the calendar week preceding the date of interview. In the conventional parlance of the Bureau of the Census, it means the "reference week."

TENRSQ

The square of the actual number of years of service with the 1971 employer.

TENURE

The number of years of service with the respondent's survey week employer.

TRAIN

A binary variable indicating that the respondent had received formal occupational training outside regular school prior to 1966. [See OCCUPATIONAL TRAINING.]

TRAINING 1966-1969

A binary variable indicating that the respondent had received one or more weeks of formal occupational training in the three-year period 1966 to 1969. [See OCCUPATIONAL TRAINING.]

TRAINING 1966 TO 1969 USED ON CURRENT OR LAST JOB (T₆₆₋₆₉)

Respondents were asked in 1967, 1969, and 1971 about their participation in training programs outside the regular school system since the previous survey. To construct the categorical variable T₆₆₋₆₉, information from the 1967 and 1969 surveys was used to determine whether a respondent participated in any training program between 1966 and 1969, and, if so, its institutional source, and whether it subsequently was used in his job. For those with more than one training experience the institutional source of training is described using the training source of longest duration (measured in weeks). A respondent is not classified as having had training unless the training was used on his job. In all cases where the respondent is not using the training or where information necessary to determine this by institutional source is absent, the training is classified as not ascertainable (NA). [See OCCUPATIONAL TRAINING.]

TRAINING 1966-1971

A binary variable indicating that the respondent had received one or more weeks of formal occupational training in the five-year period 1966 to 1971. [See OCCUPATIONAL TRAINING.]

TRAINING 1969-1971

A binary variable indicating that the respondent had received one or more weeks of formal occupational training within the two-year period 1969 to 1971. [See OCCUPATIONAL TRAINING.]

TRAINING PRIOR TO 1966 USED ON CURRENT OR LAST JOB (T₆₆ AND T'₆₆)

Information about participation in training programs outside the regular school system prior to 1966 was collected for the most recent source of training in each of five institutional categories: (1) business college or technical school; (2) company school of six weeks or more; (3) armed forces training with a civilian counterpart; (4) formal on-the-job training, apprenticeship, MDTA, etc.; and (5) general education. To construct the categorical variable T₆₆ this information is used to determine whether the respondent participated in training prior to 1966, and, if so, the institutional source of training, and whether it was used on his job. For those with more than one prior training experience the institutional source of training is described using the training source of longest duration (measured in weeks). A respondent is not classified as having had training unless the training was used on his job. In all cases where the respondent is not using the training, or where information necessary to determine this by institutional source is absent, the training is classified as not ascertainable (NA). Training received prior to 1966 and used on current or last job is measured alternatively by collapsing the institutional sources of training into a single category identified as "some training" (T'₆₆). [See OCCUPATIONAL TRAINING.]

TRNBTH

A binary variable indicating that the respondent received formal occupational training outside of regular school prior to 1966 and in the five-year period 1966-1971. [See OCCUPATIONAL TRAINING.]

TRN66

A binary variable indicating that the respondent received formal occupational training outside regular school only prior to 1966. [See OCCUPATIONAL TRAINING.]

TRN71

A binary variable indicating that the respondent received formal occupational training outside regular school only between 1966 and 1971. [See OCCUPATIONAL TRAINING.]

UNEMPLOYMENT, 1968-1969 ONLY

A binary variable indicating that the respondent experienced at least one week of unemployment in the 12-month period between 1968 and 1969 survey dates but reported no unemployment experience in the period between 1969 and 1971 survey dates. [See UNEMPLOYMENT EXPERIENCE.]

UNEMPLOYMENT, 1968-1969 AND 1969-1971

A binary variable indicating that the respondent experienced at least one week of unemployment in the 12-month period preceding the 1969 interview and in the period between survey dates 1969 and 1971. [See UNEMPLOYMENT EXPERIENCE.]

UNEMPLOYMENT, 1969-1971 ONLY

A binary variable indicating that the respondent experienced at least one week of unemployment in the period between survey dates 1969 and 1971 but reported no unemployment experience in the 12-month period between 1968 and 1969 survey dates. [See UNEMPLOYMENT EXPERIENCE.]

UNEMPLOYMENT EXPERIENCE

In 1966 survey, the number of weeks in calendar year 1965 that the respondent reported he was looking for work or on layoff from a job. In 1967, 1968, and 1969 the reference periods are the 12-month periods prior to interview. In the 1971 survey the reference period is the period between the 1969 and 1971 survey dates. The latter period varies among respondents, since interviews generally occurred over a two- or three-month period and the interview date was not necessarily the same each year with each respondent.

UNEMPLOYMENT RATE

Rate of unemployment in the local area in which the respondent resides. The rate is based on the 12-month average for the specified year obtained from the CPS for that area.

UNP: See UNEMPLOYMENT RATE

UNRATE: See UNEMPLOYMENT RATE

VOLUNT

For interfirm movers only, a binary variable indicating that the respondent left his 1966 survey week employer voluntarily during the 1966 to 1971 period. [See COMPARATIVE JOB STATUS.]

VOLUNTARY MOBILITY (SEPARATION)

A binary variable indicating that the respondent left his 1969 survey week employer voluntarily during the period 1969 to 1971. [See COMPARATIVE JOB STATUS.]

WAGE 66: See AVERAGE HOURLY EARNINGS

WEEKS IN THE LABOR FORCE

In the 1966 survey, the cumulative number of weeks in calendar year 1965 that the respondent reported that he either worked, looked for work, or was on layoff from a job. In the 1967, 1968, and 1969 surveys, reference periods are the 12-month periods prior to interview. In the 1971 survey the reference period is the time that elapsed between the 1969 and 1971 survey dates. Note that this period is variable among respondents, since interviews generally occurred over a two- or three-month period and were not necessarily at the same time each year with each respondent.

WEEKS OUT OF THE LABOR FORCE

In 1966, 1967, 1968 and 1969 it is computed as the arithmetic difference between 52 and the number of weeks in the labor force. In 1971 it represents the number of weeks between the 1969 and 1971 interview dates less the number of weeks in the labor force. [See WEEKS IN THE LABOR FORCE.]

WEEKS UNEMPLOYED

The number of weeks the respondent reported he was looking for work or on layoff from a job. In the 1966 survey, the reference period is calendar year 1965 whereas in 1967, 1968, and 1969 the reference periods are the 12-month periods prior to interview. The reference period in the 1971 survey is the time that elapsed between the 1969 and 1971 survey dates.

WORK COMMITMENT

An index designed to measure the extent of a respondent's attachment to the work role. This index is derived from two questions in the 1966 survey. The first asked the respondent whether he would continue to work if he had enough money to live comfortably without working. The second inquired what he would do if he were permanently laid off from his current job. Men who responded to both questions by reporting they would continue to work or seek employment were classified as having a "high" work commitment; those who reported that they would continue to work or seek employment as one of the responses and would not drop out of the labor force as the other comprised the category of respondents with "medium" work commitment; the "low" commitment group consisted mainly of men who reported they would not seek work to one or both questions.

YEARS OF SCHOOL COMPLETED

The highest grade finished by the respondent in "regular" school, where years of college completed are denoted 13, 14, 15, etc. "Regular" schools include graded public, private, and parochial elementary and high schools; colleges; universities; and professional schools.

APPENDIX C

SAMPLING, INTERVIEWING
AND ESTIMATING PROCEDURES

APPENDIX C

SAMPLING, INTERVIEWING AND ESTIMATING PROCEDURES

The Survey of Work Experience of Mature Men is one of four longitudinal surveys sponsored by the Manpower Administration of the U.S. Department of Labor. Taken together these surveys constitute the National Longitudinal Surveys. Each of the four NLS samples was designed by the United States Bureau of the Census to represent the civilian noninstitutional population of the United States at approximately the time of the initial survey. Because of attrition from the samples over the years of the surveys, they cannot be construed to be precisely representative of the civilian population in any year after the first.

The 1971 survey was the fourth personal interview conducted for the Survey of Work Experience of Mature Men.¹ The respondents were between the ages of 45 and 59 at the time of the first interview in 1966; thus, the age range in 1971 was 50 to 64.

Sample Design

The cohort is represented by a multi-stage probability sample located in 235 sample areas comprising 485 counties and independent cities representing every state and the District of Columbia. The 235 sample areas were selected by grouping all of the nation's counties and independent cities into about 1,900 primary sampling units (PSU's) and further forming 235 strata of one or more PSU's that are relatively homogeneous according to socioeconomic characteristics. Within each of the strata a single PSU was selected to represent the stratum. Within each PSU a probability sample of housing units was selected to represent the civilian noninstitutional population.

Since one of the survey requirements was to provide separate reliable statistics for blacks, households in predominantly black enumeration districts (ED's) were selected at a rate approximately three times that for households in predominantly white ED's. The sample was designed to provide approximately 5,000 respondents--about 1,500 blacks and 3,500 whites.

An initial sample of about 42,000 housing units was selected and a screening interview took place in March and April 1966. Of this number, about 7,500 units were found to be vacant, occupied by persons whose usual residence was elsewhere, changed from residential use, or demolished. On the other hand, about 900 additional units were found which had been created within existing living space or had been changed from what was previously nonresidential space. Thus, 35,360 housing units were available for

¹ Interviews were also conducted in 1967 and 1969. A brief mailed questionnaire was used in 1968.

interview, of which usable information was collected for 34,662 households, a completion rate of 98.0 percent.

Following the initial interview and screening operation, 5,518 males aged 45 to 59 were designated to be interviewed. These were sampled differentially within four strata: whites in white ED's (i.e., ED's which contained predominantly white households), blacks in white ED's, whites in black ED's, and blacks in black ED's.

The Field Work

Over three hundred interviewers were assigned to each of the surveys. Since many of the procedures and the labor force concepts used in the NLS were similar to those employed in the Current Population Survey (CPS), the Census Bureau used only interviewers with CPS experience.

In each of the surveys, a two-stage training program was used to provide specific instruction to the interviewers. First, two supervisors from each of the Bureau's 12 regional offices were trained in Washington; they in turn trained the interviewers and office clerks assigned to the survey in their regions. Each trainee was provided with a "verbatim" training guide prepared by the Bureau staff and reviewed by the Manpower Administration and the Center for Human Resource Research of The Ohio State University. The guide included not only lecture material, but a number of structured practice interviews to familiarize the interviewers with the questionnaire. In addition to the classroom training, each interviewer was required to complete at least one live interview prior to beginning an assignment. For the 1971 survey, twenty-eight training sessions were held in different regions of the country. Training began on July 27, 1971, and interviewing immediately thereafter. The interviewing continued until the end of September.

In addition to training, a field edit was instituted to insure adequate quality. In the 1966 and 1967 surveys, this consisted of a "full edit" of the first several schedules returned by each interviewer and a partial edit of the remaining questionnaires from each interviewer's assignment. The full edit consisted of reviewing the questionnaires from beginning to end, to determine if the entries were complete and consistent and whether the "skip" instructions were being followed. The interviewer was contacted by phone concerning minor problems and, depending on the nature of the problem, was either merely told of the error or asked to contact the respondent for additional information or for clarification. For more serious problems the interviewer was retrained either totally or in part, and the questionnaire was returned for completion.

If problems arose, the complete edit was continued until the supervisor was satisfied that the interviewer was doing a complete and consistent job. The partial edit simply checked to determine that the interviewer had not inadvertently skipped any part of the questionnaire which should have been filled. Any questionnaire which failed the partial edit was returned to the interviewer for completion. In the 1969 and 1971 surveys, a "full edit" was used on all the schedules.

Estimating Methods

The estimating procedure used in the NLS involved multi-stage ratio estimates.

Basic weight The first step was the assignment to each sample case of a basic weight consisting of the reciprocal of the final probability of selection. The probability reflects the differential sampling which was employed by color within each stratum.

Noninterview adjustment In the initial survey the weights for all those interviewed were adjusted to the extent needed to account for persons for whom no information was obtained because of absence, refusal, or unavailability for other reasons. This adjustment was made separately for each of eight groupings: Census region of residence (Northeast, North Central, South, West) by place of residence (urban, rural).

Ratio estimates The distribution of the population selected for the sample may differ somewhat, by chance, from that of the nation as a whole with respect to residence, age, color, and sex. Since these population characteristics are closely correlated with the principal measurements made from the sample, the measurements can be substantially improved when weighted appropriately to conform to the known distribution of these population characteristics. This was accomplished in the initial survey through two stages of ratio estimation.

The first stage of ratio estimation takes into account differences at the time of the 1960 Census between the distribution by color and residence of the population as estimated from the sample PSU's and that of the total population in each of the four major regions of the country. Using 1960 Census data, estimated population totals by color and residence for each region were computed by appropriately weighting the Census counts for PSU's in the sample. Ratios were then computed between these estimates (based on sample PSU's) and the actual population totals for the region as shown by the 1960 Census.

In the second stage, the sample proportions were adjusted to independent current estimates of the civilian noninstitutionalized population by age and color. These estimates were prepared by carrying forward the most recent Census data (1960) to take account of subsequent aging of the population, mortality, and migration between the United States and other countries. The adjustment was made by color within three age groupings.

Weights for subsequent years As a result of the above steps, each sample person has a weight which remains unchanged throughout the life of the study. The universe of study was thus fixed at the time of interview for the first survey. Since no reweighting of the sample was made after subsequent surveys, the group of interviewed persons is an unbiased sample of the population group in existence at the time of the first survey only. The number of men with whom initial interviews were conducted was 5,020.

Coding and Editing

Most of the data on the interview schedules required no coding, since a majority of the answers were numerical entries or in the form of precoded categories. However, clerical coding was necessary for the occupational and industrial classification of the several jobs referred to in the interview. The Census Bureau's standard occupation and industry codes used for the CPS were employed for this purpose. Codes for other open-ended questions were assigned by the Census Bureau, in some cases on the basis of guidelines developed by the Center for Human Resource Research from tallies of subsamples of the returns.

The consistency edits for the interview schedules were completed on the computer by the Census Bureau. For the parts of the questionnaire which were similar to the CPS, a modified CPS edit was used. For all other sections, separate consistency checks were performed. None of the edits included an allocation routine which was dependent on averages or random information from outside sources, since such allocated data could not be expected to be consistent with data from previous or subsequent surveys. However, where the answer to a question was obvious from others in the questionnaire, the missing answer was entered on the tape. To take an example from the initial (1966) survey, if item 39a ("Is there a compulsory retirement age where you work?") was blank but legitimate entries appeared in 39b and 39c ("At what age?" and "Would you like to work longer?") a "Yes" was inserted in item 39a. In this case, only if 39a was marked "Yes" could 39b and 39c be filled; therefore the assumption was made that either the card punch operator failed to punch the item or the interviewer failed to mark it.

APPENDIX D
INTERVIEW SCHEDULES

The interview schedules for the 1966 and 1971 surveys are displayed in the following pages. Data used in the volume that are based on the 1967, 1968, or 1969 surveys were derived from questions identical or analogous to those included in these schedules.

FORM LGT-101 (4-9-66)	U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS	NOTICE - Your report to the Census Bureau is confidential by law (Title 13 U.S. Code). It may be seen only by sworn Census employees and may be used only for statistical purposes.
NATIONAL LONGITUDINAL SURVEYS SURVEY OF WORK EXPERIENCE OF MEN 45-59 1966		1. Control number _____ 2. Line number of respondent _____
		3. Address _____
		4. Name of respondent _____
		5. Interviewed by: _____ 6. Date _____

RECORD OF CALLS		
Date	Time	Comments
1. _____	a.m. p.m.	_____
2. _____	a.m. p.m.	_____
3. _____	a.m. p.m.	_____
4. _____	a.m. p.m.	_____

RECORD OF INTERVIEW			
Interview time		Date completed	Comments
Began	Ended		
a.m. p.m.	a.m. p.m.	_____	_____

NONINTERVIEW REASON	
1 ☐ Temporarily absent 2 ☐ No one home 3 ☐ Refused	4 ☐ Moved or left household - Enter new address _____ 5 ☐ Other - Specify _____

TRANSCRIPTION FROM HOUSEHOLD RECORD CARD	Item 22	Items 23-25
	1 ☐ Owned or being bought 2 ☐ Rented 3 ☐ No cash rent	1 ☐ A 4 ☐ D 2 ☐ B 5 ☐ E 3 ☐ C

Notes

A. CURRENT LABOR FORCE STATUS		
1. What were you doing most of LAST WEEK – Working Looking for work or something else? 1 ☐ WK – Working – Skip to 2a → 2 ☐ J – With a job but not at work 3 ☐ LK – Looking for work 4 ☐ R – Retired 5 ☐ S – Going to school 6 ☐ U – Unable to work – Skip to 5a 7 ☐ OT – Other – Specify _____	2. Did you do any work at all LAST WEEK, not counting work around the house? (Note: If farm or business operator in household, ask about unpaid work.) 1 ☐ Yes x ☐ No – Skip to 3 2a. How many hours did you work LAST WEEK at all jobs? 2b. INTERVIEWER CHECK ITEM 1 ☐ 49 or more – Skip to 6 2 ☐ 1–34 – Ask 2c 3 ☐ 35–48 – Ask 2d 2d. Did you lose any time or take any time off LAST WEEK for any reason such as illness, holiday, or slack work? 1 ☐ Yes – How many hours did you take off? 2 ☐ No (Correct 2a if lost time not already deducted; if 2a reduced below 35, fill 2c, otherwise skip to 6.) 2e. Did you work any overtime or at more than one job LAST WEEK? 1 ☐ Yes – How many extra hours did you work? 2 ☐ No (Correct 2a if extra hours not already included and skip to 6.)	(If "J" in 1, skip to 3a.) 3. Did you have a job (or business) from which you were temporarily absent or on layoff LAST WEEK? 1 ☐ Yes x ☐ No – Skip to 4 3a. Why were you absent from work LAST WEEK? 1 ☐ Own illness 2 ☐ On vacation 3 ☐ Bad weather 4 ☐ Labor dispute 5 ☐ New job to begin within 30 days – Ask 4b2 6 ☐ Temporary layoff (Under 30 days) 7 ☐ Indefinite layoff (30 days or more or no definite recall date) 8 ☐ Other – Specify _____ 3b. Are you getting wages or salary for any of the time off LAST WEEK? 1 ☐ Yes 2 ☐ No 3 ☐ Self-employed 3c. Do you usually work 35 hours or more a week at this job? 1 ☐ Yes 2 ☐ No (Skip to 6 and enter job held last week.)
2c. Do you USUALLY work 35 hours or more a week at this job? 1 ☐ Yes – What is the reason you worked less than 35 hours LAST WEEK? 2 ☐ No – What is the reason you USUALLY work less than 35 hours a week? (Mark the appropriate reason) 01 ☐ Slack work 02 ☐ Material shortage 03 ☐ Plant or machine repair 04 ☐ New job started during week 05 ☐ Job terminated during week 06 ☐ Could find only part-time work 07 ☐ Holiday (legal or religious) 08 ☐ Labor dispute 09 ☐ Bad weather 10 ☐ Own illness 11 ☐ On vacation 12 ☐ Too busy with housework, school, personal business, etc. 13 ☐ Did not want full-time work 14 ☐ Full-time work week under 35 hours 15 ☐ Other reason – Specify _____ (If entry in 2c, skip to 6 and enter job worked at last week.)	Notes	

A. CURRENT LABOR FORCE STATUS - Continued

(If "LK" in 1, skip to 4a.)

4. Have you been looking for work during the past 4 weeks?

1 ☐ Yes

x ☐ No - Skip to 5a

4a. What have you been doing in the last 4 weeks to find work?

(Mark all methods used; do not read list.)

Checked with -

1 ☐ Public employment agency

2 ☐ Private employment agency

3 ☐ Employer directly

4 ☐ Friends or relatives

5 ☐ Placed or answered ads

6 ☐ Nothing - Skip to 5a

7 ☐ Other - Specify - e.g., MDTA, union or professional register, etc.

4a.1 When did you last do this (any of these)?

1 ☐ LAST week (or this week)

2 ☐ 2 weeks ago

3 ☐ 3 weeks ago

4 ☐ 4 or more weeks ago - Ask 4b1

4b. 1) How many weeks have you been looking for work?

2) How many weeks ago did you start looking for work?

3) How many weeks ago were you laid off?

Number of weeks _____

4c. Have you been looking for full-time or part-time work?

1 ☐ Full-time work

2 ☐ Part-time work

4d. Is there any reason why you could not take a job LAST WEEK?

2 ☐ Already has a job

1 ☐ Yes

3 ☐ Temporary illness

6 ☐ No

4 ☐ Going to school

5 ☐ Other - Specify

4e. When did you last work at a full-time job or business lasting two consecutive weeks or more?

1 ☐ 1961 or later - Specify month and year

Month _____ Year _____

2 ☐ Before 1961

3 ☐ Never worked full time 2 weeks or more

4 ☐ Never worked at all

Enter last full-time civilian job lasting 2 weeks or more in 6.

Skip to 54

5a. When did you last work at a regular full or part-time job or business?

1 ☐ 1961 or later - Specify month and year and ask 5b

Month _____ Year _____

2 ☐ Before 1961 - Ask 5b

3 ☐ Never worked - Skip to 54

5b. Why did you leave that job?

1 ☐ Personal, family, or school reasons

2 ☐ Health

3 ☐ Retirement or old age

4 ☐ Seasonal job completed

5 ☐ Slack work or business conditions

6 ☐ Temporary nonseasonal job completed

7 ☐ Unsatisfactory work arrangements (hours, pay, etc.)

8 ☐ Other

(Go to 6 and describe that job)

6. DESCRIPTION OF JOB OR BUSINESS

6a. For whom did you work? (Name of company, business, organization or other employer)

6b. In what city and State is . . . located?

City _____

State _____

6c. What kind of business or industry is this? (For example, TV and radio manufacturer, retail shoe store, State Labor Department, farm.)

Census use only

6d. Were you -

1 ☐ P - An employee of PRIVATE company, business, or individual for wages, salary, or commission?

2 ☐ G - A GOVERNMENT employee (Federal, State, county, or local)?

3 ☐ O - Self-employed in OWN business, professional practice, or farm?

(If not a farm)

Is this business incorporated?

☐ Yes

☐ No

4 ☐ WP - Working WITHOUT PAY in family business or farm?

6e. What kind of work were you doing? (For example, electrical engineer, stock clerk, typist, farmer.)

Census use only

A. CURRENT LABOR FORCE STATUS - Continued		Do not use
7. When did you start working at this job or business? (If before 1965, enter year only; if 1965 or later, enter month and year.)		7. Year and/or month
CHECK ITEM A	1 ☐ "P" or "G" in item 6d - Ask 8	
	2 ☐ "O" or "WP" in item 6d - Skip to Check Item B	
8. How much do you usually earn at this job before deductions? (If amount given per hour, record dollars and cents; otherwise, round to the nearest dollar.)		8.
9a. Did you ever do any other kind of work for (Name of employer)?		9a. 1 ☐ Yes - Ask 9b 2 ☐ No - Skip to Check Item B
b. What kind of work were you doing when you started with ... ? If "Other," specify here _____		b. 1 ☐ Same as current (last) job 2 ☐ Other
c. Of the kinds of work you have done for ..., which did you like best? If "Other," specify here _____		c. 1 ☐ Same as current (last) job 2 ☐ Same as first job 3 ☐ Other
d. How long did you work as (entry in 9c) with ... ? (If less than 1 year, enter number of months.)		d. Years _____ Months - If less than 1 year _____ OR
e. (If entry in 9c is different from entry in 6e) How did you happen to stop working as (entry in 9c) with ... ? _____ _____		
CHECK ITEM B	Respondent is in -	
	1 ☐ Labor Force Group "A" ("WK" in 1 or "Yes" in 2 or 3) 2 ☐ Labor Force Group "B" ("LK" in 1 or "Yes" in 4) 3 ☐ All others - Ask 10a	Skip to 11a
10a. Do you intend to look for work of any kind in the next 12 months? If "Maybe," specify here _____		10a. 1 ☐ Yes - definitely 2 ☐ Yes - probably 3 ☐ Maybe - it depends on 4 ☐ No 5 ☐ Don't know
b. Is there any particular reason why you are not looking for work at this time? (Specify below, then mark one box.) _____ _____ _____		b. 1 ☐ Training or school 2 ☐ Personal or family 3 ☐ Health reasons 4 ☐ Believe no work available 5 ☐ Do not want work at this time of year 6 ☐ Retired 7 ☐ Other or no reason
Notes		

B. WORK EXPERIENCE IN 1965		Do not use
11a. Now I have some questions on your work experience during 1965. In how many different weeks did you work (either full or part time) in 1965 (not counting work around the house)? (Include paid vacations and paid sick leave.) b. During the weeks that you worked in 1965, how many hours per week did you usually work? Enter number of hours, then mark box _____		11a. Number of weeks _____ ☐ None - Skip to 13a b. 1 ☐ Under 15 4 ☐ 41-47 2 ☐ 15-34 5 ☐ 48 or more 3 ☐ 35-40
CHECK ITEM C 1 ☐ 52 weeks in 11a - Ask 12a 2 ☐ 1-51 weeks in 11a - Skip to 12b		
12a. Did you lose any full weeks of work in 1965 because you were on layoff from a job or lost a job? b. You say you worked (entry in 11a) weeks in 1965. In any of the remaining (52 weeks minus entry in 11a) _____ weeks were you looking for work or on layoff from a job? c. Were all of these weeks in one stretch?		12a. 1 ☐ Yes - How many weeks? _____ (Adjust item 11a and skip to 12c) 2 ☐ No - Skip to Check Item D b. 1 ☐ Yes - How many weeks? _____ (Ask 12c) 2 ☐ No - Skip to Check Item D c. 1 ☐ Yes, 1 2 ☐ No, 2 3 ☐ No, 3, or more Skip to Check Item D
13a. (For those who did not work in 1965) Even though you did not work in 1965, did you spend any time trying to find work or on layoff from a job? b. How many different weeks were you looking for work or on layoff from a job? Enter number of hours, then mark box _____		13a. 1 ☐ Yes - Ask 13b 2 ☐ No - Skip to 14 and ask about 52 weeks b. 1 ☐ 1-4 3 ☐ 11-14 5 ☐ 27-39 2 ☐ 5-10 4 ☐ 15-26 6 ☐ 40-52
CHECK ITEM D Refer to items 11a, 12b, and 13b 1 ☐ All weeks accounted for - Skip to Check Item E 2 ☐ Some weeks not accounted for - Ask 14		
14. Now let me see. During 1965 there were about (52 weeks minus entries in items 11a, 12b, or 13b) _____ weeks that you were not working or looking for work. What would you say was the main reason that you were not looking for work? If "Other," specify here _____		14. 1 ☐ Ill or disabled and unable to work 2 ☐ Retired 3 ☐ Couldn't find work 4 ☐ Vacation 5 ☐ Other
CHECK ITEM E 1 ☐ "O" in 6d - Ask 15a 2 ☐ "P," "G," or "WP" in 6d - Skip to 15b		
15a. I see you are self-employed. Did you work for anyone else for wages or salary in 1965? b. In 1965, for how many employers did you work?		15a. 1 ☐ Yes - Ask 15b 2 ☐ No - Skip to Check Item F b. Number of employers _____ 1 ☐ Did not work in 1965
Notes		

C. WORK EXPERIENCE BEFORE 1965		Do not use
CHECK ITEM F	Refer to item 7 1 ☐ Job recorded in 7 began in 1961 or later — Ask 16a 2 ☐ All others — Skip to 17a	
16a. I'd like to know about the job you had just before you started working at (entry in 6a). What kind of work were you doing when you left your previous job? _____ b. What kind of business or industry was that? _____ c. Were you — 1) An employee of PRIVATE company, business, or individual for wages, salary, or commission? 2) A GOVERNMENT employee (Federal, State, county, or local)? 3) Self-employed in OWN business, professional practice, or farm? 4) Working WITHOUT PAY in family business or farm? d. Where was that job located? e. In what year did you START working at that job? f. In what year did you STOP working at that job? g. Then you worked there for ("f" minus "e") _____ years, is that correct? 1 ☐ Yes 2 ☐ No — Correct dates in "e" and "f" as necessary h. How did you happen to leave that job? _____		
17a. Now, of all the jobs you have ever had, I'd like to know about the one at which you worked longest. For whom did you work then? b. What kind of work were you doing longest on that job? _____ c. What kind of business or industry was that? _____ d. Were you — 1) An employee of PRIVATE company, business, or individual for wages, salary, or commission? 2) A GOVERNMENT employee (Federal, State, county, or local)? 3) Self-employed in OWN business, professional practice, or farm? 4) Working WITHOUT PAY in family business or farm? e. Where was that job located? f. In what year did you START working at that job? g. In what year did you STOP working at that job?		16c. 1 ☐ P — Private 2 ☐ G — Government 3 ☐ O — Self-employed 4 ☐ WP — Without pay d. City or county _____ State _____ e. Year _____ f. Year _____ g. Number of years _____ OR if less than 1 year — 1 ☐ 6 months or more 2 ☐ Less than 6 months 17a. 1 ☐ Same as current (last) job 2 ☐ Same as job before current (last) job 3 ☐ Other — Ask 17b-i } Ask 17b and skip 1, 2, 3

C. WORK EXPERIENCE BEFORE 1965 - Continued		Do not use
17h. Then you worked there for ("g" minus "f") _____ years, is that correct? 1 ☐ Yes 2 ☐ No - Correct dates in "f" and "g" as necessary i. How did you happen to leave that job? _____ _____	17h. Number of years _____	
18a. Let's look back now to when you stopped going to school full-time, I'd like to know about the first job at which you worked at least a month. For whom did you work then?	18a. 1 ☐ Same as current job 2 ☐ Same as job before current (last) job 3 ☐ Same as longest job 4 ☐ Other - Ask 18b-i } Ask 18b and skip to 19	
b. What kind of work were you doing when you started working on that job? _____ _____		
c. What kind of business or industry was that? _____ _____		
d. Were you - 1) An employee of PRIVATE company, business, or individual for wages, salary, or commission? 2) A GOVERNMENT employee (Federal, State, county, or local)? 3) Self-employed in OWN business, professional practice, or farm? 4) Working WITHOUT PAY in family business or farm?	d. 1 ☐ P - Private 2 ☐ G - Government 3 ☐ O - Self-employed 4 ☐ WP - Without pay	
e. Where was that job located?	e. City or county _____ State _____	
f. In what year did you START working at that job?	f. Year _____	
g. In what year did you STOP working at that job?	g. Year _____	
h. Then you worked there for ("g" minus "f") _____ years, is that correct? 1 ☐ Yes 2 ☐ No - Correct dates in "f" and "g" as necessary	h. Number of years _____	
i. How did you happen to leave that job? _____ _____		
19. Now, instead of talking about your employers, let's talk about the kinds of work you have done. I'd like you to think about the best KIND of work you have ever done. What kind of work was that? _____ _____		
20. Altogether, how long have you worked as (entry in 19)?	20. 1 ☐ Under a year - Months _____ 2 ☐ 1-4 years 3 ☐ 5-9 years 4 ☐ 10-19 years 5 ☐ 20 years or more	
CHECK ITEM G	1 ☐ Entry in item 19 same as entry in item 6e - Skip to Check Item H 2 ☐ Entry in item 19 different from entry in item 6e - Ask 21	

C. WORK EXPERIENCE BEFORE 1965 - Continued		Do not use
21. How old were you when you last worked as (entry in 19)?	21. Age _____	
22. Would you like to be working as (entry in 19) now? If "No," specify here _____	22. 1 ☐ Yes - Ask 23 2 ☐ No - Why not? - Specify and skip to Check Item H	
23. Why would you say you are not working as (entry in item 19)? _____		
Notes		
D. ATTITUDES TOWARD WORK		
CHECK ITEM H	Respondent is in - 1 ☐ Labor Force Group "A" ("WK" in 1 or "Yes" in 2 or 3) - Ask 24 2 ☐ Labor Force Group "B" ("LK" in 1 or "Yes" in 4) - Skip to 35a 3 ☐ All others - Skip to 37a	
24. How do you feel about the job you have now? Do you Respondent's comments: _____		24. 1 ☐ Like it very much? 2 ☐ Like it fairly well? 3 ☐ Dislike it somewhat? 4 ☐ Dislike it very much? } Enter respondent's comments
25. What are the things you like best about your job? (Try to obtain three things.) 1. _____ 2. _____ 3. _____		
26. What are the things about your job that you don't like so well? (Try to obtain three things.) 1. _____ 2. _____ 3. _____		
27. What would you say is the more important thing about any job - good wages or liking the kind of work you are doing? Respondent's comments: _____		27. 1 ☐ Good wages 2 ☐ Liking the work
28a. If, by some chance, you were to get enough money to live comfortably without working, do you think that you would work anyway? b. (If "Yes" in 28a) Why do you feel that you would work? c. (If "No" in 28a) Why do you feel that you would not work?		28a. 1 ☐ Yes - Ask 28b 2 ☐ No - Skip to 28c 3 ☐ Undecided - Skip to 28d

D. ATTITUDES TOWARD WORK - Continued		Do not use
28d. (If "Undecided" in 28a) On what would it depend? _____		
29a. Suppose someone IN THIS AREA offered you a job in the same line of work you're in now. How much would the new job have to pay for you to be willing to take it? (If amount given per hour, record dollars and cents, otherwise, round to the nearest dollar.) Respondent's comments: _____ b. What if this job were IN SOME OTHER PART OF THE COUNTRY - how much would it have to pay in order for you to be willing to take it? (If amount given per hour, record dollars and cents; otherwise, round to nearest dollar.) Respondent's comments: _____	29a. \$ _____ per _____ 1 ☐ I wouldn't take it at any conceivable pay 2 ☐ I would take a steady job at same or less pay ----- b. \$ _____ per _____ 1 ☐ I wouldn't take it at any conceivable pay 2 ☐ I would take a steady job at same or less pay (If "0" in 6d, skip to 40; otherwise, ask 30)	
30. If for some reason you were permanently to lose your present job tomorrow, what would you do? If "Other," specify here _____	30. 1 ☐ Retire - Ask 31 2 ☐ Take another job I know about - Skip to 32a 3 ☐ Go into business - Skip to 33a 4 ☐ Look for work - Skip to 34a 5 ☐ Other - Skip to 39a	
31. (If "Retire" in 30) Why do you think you would retire? _____ Skip to 39a		
32a. (If "Take another job" in 30) For whom would you work? _____ b. What kind of business or industry would this be? _____ c. What kind of work do you think you would be doing? _____ d. In what city (or county) and State would this job be located?		32d. City or county _____ State _____ Skip to 39a
33a. (If "Go into business" in 30) What kind of business? _____ b. In what city (or county) and State would it be located?		33b. City or county _____ State _____ Skip to 39a
34a. (If "Look for work" in 30) What kind of work would you look for? _____ b. How would you go about looking for this kind of work? If "Other," specify here _____		34b. 1 ☐ Check with public employment agency 2 ☐ Check with private employment agency 3 ☐ Check directly with employer 4 ☐ Place or answer ads 5 ☐ Check with friends or relatives 6 ☐ Other

D. ATTITUDES TOWARD WORK - Continued		Do not use
34c. Are there any particular employers to whom you would apply? (List employers and enter number in space provided.) 1. _____ 2. _____ 3. _____ d. (If entry in 34c) Why do you mention these particular employers? _____ _____ Skip to 39a	34c. Number of employers listed _____ o ☐ None - Skip to 39a	
Labor Force Group B respondents only - 2 marked in Check Item H		
35a. If you were offered a job IN THIS AREA at the same pay as your last job, would you take it? (If box 2 or 3 marked, specify here) _____ b. If you were offered a job IN ANOTHER PART OF THE COUNTRY at the same pay as your old job, would you take it? (If box 2 or 3 marked, specify here) _____	35a. 1 ☐ Yes, definitely 2 ☐ It depends. On what? } Specify 3 ☐ No - Why not? b. 1 ☐ Yes, definitely 2 ☐ It depends. On what? } Specify 3 ☐ No - Why not?	
36a. If, by some chance, you were to get enough money to live comfortably without working, do you think that you would work anyway? b. (If "Yes" in 36a) Why do you feel that you would work? _____ c. (If "No" in 36a) Why do you feel that you would not work? _____ d. (If "Undecided" in 36a) On what would it depend? _____	36a. 1 ☐ Yes - Ask 36b 2 ☐ No - Skip to 36c 3 ☐ Undecided - Skip to 36d	
All others - 3 marked in Check Item H		
37a. If you were offered a job by some employer IN THIS AREA, do you think you would take it? (If box 2 or 3 marked, specify here) _____ b. What kind of work would it have to be? _____ c. What would the wage or salary have to be? (If amount given per hour, record dollars and cents; otherwise, round to the nearest dollar.)	37a. 1 ☐ Yes - Ask 37b-c 2 ☐ It depends. On what? } Specify then skip to 38 3 ☐ No - Why not? c. \$ _____ per _____	
38. What would you say is the more important thing about any job - good wages or liking the kind of work you are doing? Respondent's comments _____	38. 1 ☐ Good wages } Enter respondent's comments and skip to 40a 2 ☐ Liking the work	

E. RETIREMENT PLANS		Do not use
39a. (If currently employed) Is there a compulsory retirement plan where you work; that is, do you have to stop working at your present job at a certain age? b. At what age? c. Would you work longer than that if you could? d. Do you expect to retire before this age?	39a. 1 ☐ Yes - Ask 39b 2 ☐ No 3 ☐ Don't know } Skip to 40a b. Age _____ c. 1 ☐ Yes - Skip to 41a 2 ☐ No - Ask 39d d. 1 ☐ Yes - Ask 40a 2 ☐ No - Skip to 41a	
40a. At what age do you expect to stop working at a (your) regular job? b. Why do you expect to stop working at a (your) regular job at this age? _____	40a. 1 ☐ Age _____ Ask 40b 2 ☐ Don't plan to stop working } Skip to 42a 3 ☐ Already stopped 4 ☐ Don't know - Skip to 41a	
41a. Some men, when they stop working at a regular job, take another job. Other men decide not to work any more at all. Which of these do you think you will do? If "Other" specify here _____ b. (If "Take another job" in 41a) What kind of work will you try to get? _____ c. About how many hours a week do you think you will want to work?	41a. 1 ☐ Take another job - Ask 41b 2 ☐ Not work at all } Skip to 42a 3 ☐ Other c. Hours _____	
42a. Will you ever be eligible to receive Social Security or Railroad Retirement benefits? b. Will you be eligible for any other retirement benefits, such as personal plans, private employee, government employee, or military retirement plans?	42a. 1 ☐ Yes 2 ☐ No 3 ☐ Already receiving benefits 4 ☐ Don't know b. 1 ☐ Personal plans 2 ☐ Private employee 3 ☐ Government employee 4 ☐ Military 5 ☐ Already receiving benefits 6 ☐ No 7 ☐ Don't know	
Notes _____		

F. HEALTH						Do not use
CHECK ITEM I	1 ☐ Respondent is in Labor Force Group "A" or "B" (1 or 2 marked in Check Item H) - Skip to 43b					
	2 ☐ Other (3 marked in Check Item H) - Ask 43					
43. Does your health or physical condition -	a. Keep you from working? b. Limit the kind of work you can do? c. Limit the amount of work you can do?		43. a. 1 ☐ Yes 2 ☐ No - Ask 43b b. 1 ☐ Yes 2 ☐ No - Ask 43c c. 1 ☐ Yes 2 ☐ No - Skip to 45			
44a. (If "Yes" in any of 43a-c) In what way are you limited?						
b. How long have you been limited in this way?			b. Years _____			
45. Would you rate your health, compared with other men of about your age, as excellent, good, fair, or poor?			45. 1 ☐ Excellent 3 ☐ Fair 2 ☐ Good 4 ☐ Poor			
☐ Respondent not married - Skip to 48a						
46. Does your wife's health or physical condition -	a. Keep her from working? b. Limit the kind of work she can do? c. Limit the amount of work she can do? d. Limit the amount or kind of housework she can do?		46. a. 1 ☐ Yes 2 ☐ No - Ask 46b b. 1 ☐ Yes 2 ☐ No - Ask 46c c. 1 ☐ Yes 2 ☐ No - Ask 46d d. 1 ☐ Yes 2 ☐ No - Skip to 48a			
47a. (If "Yes" in any of 46a-d) In what way is she limited?						
b. How long has she been limited in this way?			b. Years _____			
Notes						

G. EDUCATION AND TRAINING					
48a. Now, I'd like to ask some questions about your education and specialized training. What is the highest grade (or year) of regular school you have ever attended?			48a. oo ☐ Never attended school 1 Elem. 1 2 3 4 5 6 7 8 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ 2 High 1 2 3 4 ☐ ☐ ☐ ☐ 3 College ☐ ☐ ☐ ☐ ☐ ☐ b. 1 ☐ Yes 2 ☐ No c. 1 ☐ Yes - Ask 48d 2 ☐ No - Skip to 49a 		
b. Did you finish this grade (year)?					
c. (If H3 or H4) Did you take a vocational or commercial curriculum in high school?					
d. Primarily, what kind of training did you receive?					

G. EDUCATION AND TRAINING - Continued		Do not use
49a. Aside from regular school, did you ever take a program in business college or technical institute such as draftsman or electronics training, etc.? b. Did you finish or complete this program? c. What type of training did you take? d. How long did this training last? e. Do you use this training on your present job (or last job if not employed)?	49a. 1 Yes - Ask 49b 2 No - Skip to 50a b. 1 Yes 2 No d. Months _____ e. 1 Yes 2 No	
50a. Aside from regular school, did you ever take a full-time program lasting 6 weeks or more at a company training school? b. Did you finish or complete this program? c. Why type of training did you take? d. How long did this training last? e. Do you use this training on your present job (or last job if not employed)?	50a. 1 Yes - Ask 50b 2 No - Skip to 51a b. 1 Yes 2 No d. Months _____ e. 1 Yes 2 No	
51a. Aside from regular school, did you ever take a vocational training program in the Armed Forces? b. Did you finish or complete this program? c. What type of training did you take? d. How long did this training last? e. Do you use this training on your present job (or last job if not employed)?	51a. 1 Yes - Ask 51b 2 No - Skip to 52a b. 1 Yes 2 No d. Months _____ e. 1 Yes 2 No	
52a. Aside from regular school, did you ever take any other vocational, technical, or apprenticeship training (NOT counting on-the-job training given informally)? b. Did you finish or complete this program? c. Why type of training did you take? d. How long did this training last? e. Do you use this training on your present job (or last job if not employed)?	52a. 1 Yes - Ask 52b 2 No - Skip to 53a b. 1 Yes 2 No d. Months _____ e. 1 Yes 2 No	
53a. Since you stopped going to school full time, have you taken any additional general courses such as English, math, or science? b. Did you finish or complete this course? c. What kind of course did you take? d. How long did this course last? e. Do you use this training on your present job (or last job if not employed)?	53a. 1 Yes - Ask 53b 2 No - Skip to 54 b. 1 Yes 2 No d. Months _____ e. 1 Yes 2 No	

H. ASSETS AND INCOME		Do not use
54. Is this house (apartment) owned or being bought by you (or your wife), or is it rented? If "Other," specify here _____	54. 1 ☐ Owned or being bought by respondent (or wife) — Go to Check Item J 2 ☐ Rented 3 ☐ No cash rent } Skip to 56a 4 ☐ Other	
CHECK ITEM J 1 ☐ Respondent lives ON farm — Skip to 56a 2 ☐ Respondent DOES NOT live on farm — Ask 55a		
55a. About how much do you think this property would sell for on today's market? b. How much do you (or your wife) owe on this property for mortgages, back taxes, loans, etc.? (Mortgages include deeds of trust, land contracts, contracts for deed, etc.)	55a. \$ _____ 0 ☐ None b. \$ _____ 0 ☐ None	
56a. Do you (or your wife) rent, own, or have an investment in a farm? b. What is the total market value of your farm operation? (Include value of land, buildings, house, if you own them, and the equipment, livestock, stored crops, and other assets. Do not include crops held under Commodity Credit Loans.) c. Does that include the value of this house? d. How much do you think this house would sell for on today's market? e. How much do you owe on mortgages or other debts in connection with the farm itself, the equipment, livestock, or anything else? (Do not count Commodity Credit Loans.)	56a. 1 ☐ Yes — Ask 56b 2 ☐ No — Skip to 57a b. \$ _____ c. 1 ☐ Yes — Skip to 56e 2 ☐ No — Ask 56d d. \$ _____ 0 ☐ None e. \$ _____ 0 ☐ None	
57a. Do you (or your wife) own or have an investment in a business or professional practice? b. What is the total market value of all assets in the business, including tools and equipment? In other words, how much do you think this business would sell for on today's market? (Obtain value of respondent's and wife's share only.) c. What is the total amount of debts or liabilities owed by the business? (Include all liabilities, as carried on the books. Respondent's and wife's share only.)	57a. 1 ☐ Yes — Ask 57b 2 ☐ No — Skip to 58a b. \$ _____ 0 ☐ None c. \$ _____ 0 ☐ None	
58a. Do you (or your wife) own any other real estate — not counting the property on which you are living? b. About how much do you think this property would sell for on today's market? c. How much is the unpaid amount of any mortgages on this property? d. How much other debt do you have on this property, such as back taxes or assessments, unpaid amounts of home improvement loans, or home repair bills, etc.?	58a. 1 ☐ Yes — Ask 58b 2 ☐ No — Skip to 59a b. \$ _____ 0 ☐ None c. \$ _____ 0 ☐ None d. \$ _____ 0 ☐ None	
59a. Do you (or your wife) own an automobile? b. What is the make and model year of this automobile? (If more than 1 car, ask about newest car.) c. Do you owe any money on this automobile?	59a. 1 ☐ Yes — How many? _____ Ask 59b 2 ☐ No — Skip to 60 b. Make _____ Model year _____ c. 1 ☐ Yes — How much? \$ _____ 2 ☐ No	

H. ASSETS AND INCOME - Continued		Do not use
60. Do you (or other members of your family living here) have any money in savings or checking accounts, savings and loan companies, or credit unions?	60. 1 ☐ Yes - How much? \$ _____ 2 ☐ No	
61. Do you (or any other members of your family living here) have any of the following? a. U.S. Savings Bonds? b. Stocks, bonds, or shares in mutual funds? c. Personal loans to others or mortgages you hold (money owed to you by other people)?	61. a. 1 ☐ Yes - What is their face value? \$ _____ 2 ☐ No b. 1 ☐ Yes - What is their market value? \$ _____ 2 ☐ No c. 1 ☐ Yes - How much? \$ _____ 2 ☐ No	
62. Aside from any debts you have already mentioned, do you (and your wife) now owe any money to stores, doctors, hospitals, banks, or anyone else, excluding 30-day charge accounts?	62. 1 ☐ Yes - How much altogether? \$ _____ 2 ☐ No	
63. Now I'd like to ask a few questions on your family's income in 1965. a. In 1965, how much did you receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or anything else? b. (If respondent is married) In 1965, how much did your wife receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or anything else? c. (If other family members in household) In 1965, how much did all other family members living here receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or anything else?	63. a. \$ _____ o ☐ None b. \$ _____ o ☐ None c. \$ _____ o ☐ None	
64a. In 1965, how much did you receive from working on your own or in your own business, professional practice, or partnership? Gross income _____ less expenses _____ = Net b. In 1965, how much did all other family members living here receive from working on their own or in their own business, professional practice, or partnership? Gross income _____ less expenses _____ = Net	64a. Net income \$ _____ o ☐ None 1 ☐ Loss b. Net income \$ _____ o ☐ None 1 ☐ Loss	
65. In 1965, how much did your family receive from operating a farm? Gross income _____ less expenses _____ = Net	65. Net income \$ _____ o ☐ None 1 ☐ Loss	
CHECK ITEM K Make the following checks 1 ☐ Respondent worked in 1965 (number of weeks entered in 11a on page 5). An amount should be entered in 63a, 64a, or 65. 2 ☐ Respondent did not work in 1965 ("None" box marked in 11a on page 5). The "None" box should be marked in 63a, 64a, and 65.		
66a. In 1965, did you receive any unemployment compensation? b. (If other family members in household) In 1965, did any other family members living here receive any unemployment compensation?	66a. { How many weeks? _____ 1 ☐ Yes { How much did you receive altogether? \$ _____ 2 ☐ No b. 1 ☐ Yes - How much? _____ 2 ☐ No	
67. In addition, during 1965, did anyone in this family living here receive any rental income from roomers and boarders, an apartment in this house or another building, or other real estate? Gross income _____ less expenses _____ = Net	67. Net income \$ _____ o ☐ No	

H. ASSETS AND INCOME - Continued				Do not use																																																														
68. In 1965, did anyone receive interest or dividends on savings, stocks, bonds, or income from estates or trusts?	68. 1 ☐ Yes - How much? \$ _____ 2 ☐ No																																																																	
69. In 1965, did anyone in this family living here receive income as a result of disability or illness such as (read list): (If "Yes" to any items in list, enter amount and indicate whether received by respondent or other family member.) <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 5%; text-align: center;">Yes</th> <th style="width: 5%; text-align: center;">No</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>1. Social Security?</td> <td style="text-align: center;">1 ☐</td> <td style="text-align: center;">2 ☐</td> <td>\$</td> </tr> <tr> <td>2. Veteran's compensation or pension?</td> <td style="text-align: center;">1 ☐</td> <td style="text-align: center;">2 ☐</td> <td>\$</td> </tr> <tr> <td>3. Workmen's compensation?</td> <td style="text-align: center;">1 ☐</td> <td style="text-align: center;">2 ☐</td> <td>\$</td> </tr> <tr> <td>4. Aid to the Blind or the Permanently or Totally Disabled?</td> <td style="text-align: center;">1 ☐</td> <td style="text-align: center;">2 ☐</td> <td>\$</td> </tr> <tr> <td>5. Anything else? - Specify type</td> <td style="text-align: center;">1 ☐</td> <td style="text-align: center;">2 ☐</td> <td>\$</td> </tr> <tr> <td>_____</td> <td></td> <td></td> <td>\$</td> </tr> <tr> <td>_____</td> <td></td> <td></td> <td>\$</td> </tr> <tr> <td>_____</td> <td></td> <td></td> <td>\$</td> </tr> </tbody> </table>		Yes	No		1. Social Security?	1 ☐	2 ☐	\$	2. Veteran's compensation or pension?	1 ☐	2 ☐	\$	3. Workmen's compensation?	1 ☐	2 ☐	\$	4. Aid to the Blind or the Permanently or Totally Disabled?	1 ☐	2 ☐	\$	5. Anything else? - Specify type	1 ☐	2 ☐	\$	_____			\$	_____			\$	_____			\$	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 60%;">Amount</th> <th colspan="2" style="text-align: center;">Mark one column for each amount entered</th> </tr> <tr> <th style="width: 20%;">Respondent</th> <th style="width: 20%;">Other family member</th> </tr> </thead> <tbody> <tr><td>\$</td><td></td><td></td></tr> <tr><td>\$</td><td></td><td></td></tr> <tr><td>\$</td><td></td><td></td></tr> <tr><td>\$</td><td></td><td></td></tr> <tr><td>\$</td><td></td><td></td></tr> <tr><td>\$</td><td></td><td></td></tr> <tr><td>\$</td><td></td><td></td></tr> </tbody> </table>			Amount	Mark one column for each amount entered		Respondent	Other family member	\$			\$			\$			\$			\$			\$			\$			
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70. In 1965, did anyone receive any (other) Social Security payments?	70. 1 ☐ Yes - How much? \$ _____ Who? 2 ☐ Wife 3 ☐ Other 4 ☐ No																																																																	
71. In 1965, did anyone receive any (other) public assistance or welfare payments? If "Yes" - What type? _____	71. 1 ☐ Yes - How much? \$ _____ 2 ☐ No																																																																	
72a. In 1965, did you buy any food stamps under the Government's Food Stamp Plan? b. In how many months did you buy stamps? c. How much was your monthly bonus?	72a. 1 ☐ Yes - Ask 72b 2 ☐ No - Skip to 73 b. Months _____ c. \$ _____																																																																	
73. In 1965, did anyone receive any pensions from local, State, or Federal Government? If "Yes" - What type? _____	73. 1 ☐ Yes - How much? \$ _____ 2 ☐ No																																																																	
74. In 1965, did anyone receive any other type of income? (For example, royalties, annuities, contributions from family members living elsewhere, etc.) If "Yes" - What type? _____	74. 1 ☐ Yes - How much? \$ _____ 2 ☐ No																																																																	
Notes																																																																		

I. FAMILY BACKGROUND		Do not use
75. Now I have some questions on your family background. Where were you born?	75. State _____ County _____ _____ City or town _____ OR ☐ Outside U.S. - Specify country _____	
76. For how long have you been living in (Name of city or county of current residence)?	76. 1 ☐ Less than 1 year 2 ☐ 1 year or more - Specify _____ 3 ☐ All my life - Skip to 78a	
77. Where did you live before moving to (Name of city or county of current residence)?	77. State _____ County _____ _____ City _____ OR ☐ Outside U.S. - Specify country _____	
78a. Now I'd like to ask about your parents. Are your mother and father living? b. What about your wife's parents - are her mother and father living?	78a. 1 ☐ BOTH parents alive 2 ☐ MOTHER alive, father dead 3 ☐ FATHER alive, mother dead 4 ☐ NEITHER parent alive b. 1 ☐ Respondent not married 2 ☐ BOTH parents alive 3 ☐ MOTHER alive, father dead 4 ☐ FATHER alive, mother dead 5 ☐ NEITHER parent alive	
79. Were your parents born in the U.S. or some other country? a. Father b. Mother	79. 1 ☐ U.S. 2 ☐ Outside U.S. - Specify country _____ 1 ☐ U.S. 2 ☐ Outside U.S. - Specify country _____ If either parent born outside U.S., skip to 81a	
80. In what country were your grandparents born? a. Mother's mother b. Mother's father c. Father's mother d. Father's father	80. 1 ☐ U.S. 2 ☐ Other - Specify _____ 1 ☐ U.S. 2 ☐ Other - Specify _____ 1 ☐ U.S. 2 ☐ Other - Specify _____ 1 ☐ U.S. 2 ☐ Other - Specify _____	
81a. When you were 15 years old, were you living -	81a. 1 ☐ On a farm or ranch? 2 ☐ In the country, not on farm or ranch? 3 ☐ In a town or small city (under 25,000)? 4 ☐ In the suburb of a large city? 5 ☐ In a city of 25,000 - 100,000? 6 ☐ In a large city of 100,000 or more?	

I. FAMILY BACKGROUND - Continued		Do not use
81b. With whom were you living when you were 15 years old? (If 6 or 7 marked, specify or describe below.) _____ _____	81b. 1 ☐ Father and mother 2 ☐ Father and step-mother 3 ☐ Mother and step-father 4 ☐ Father 5 ☐ Mother 6 ☐ Some other adult MALE relative - Specify 7 ☐ Some other arrangement - Describe 8 ☐ On my own - Skip to 82a	
c. What kind of work was your father doing when you were 15 years old? (If respondent did not live with father at that age, ask about the work of the head of the household where he lived at age 15.) _____ _____		
d. What was the highest grade of school completed by your father (or the head of the household where you lived at age 15)?	d. 00 ☐ Never attended school 1 Elem. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 2 High ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 3 College ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6+ ☐ 99 ☐ Don't know	
82a. How many persons, not counting yourself (or your wife), are dependent upon you for at least one-half of their support?	82a. Number _____ 0 ☐ None - Skip to 83a	
b. Do any of these dependents live somewhere else other than here at home with you? If "Yes" - What is their relationship to you? _____ _____	b. 1 ☐ Yes - How many? _____ 2 ☐ No	
83a. Do you have any children who do not live at home with you?	83a. 1 ☐ Yes - Ask 83b x ☐ No - Skip to 84	
b. How many sons do you have living outside the household?	b. Number of sons _____	
c. How many daughters do you have living outside the household?	c. Number of daughters _____	
d. What is the highest grade of regular school these children have completed? (Fill for oldest child first, then second oldest, etc.)	d. 1 ☐ Son 2 ☐ Daughter Education 1 Elem. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 2 High ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 3 College ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6+ ☐ 00 ☐ Never attended school 99 ☐ Don't know	
Continue on next page if necessary.		

I. FAMILY BACKGROUND - Continued		Do not use
83d. What is the highest grade of regular school these children have completed? - Continued (Fill for oldest child first, then second oldest, etc.)	83d. 1 ☐ Son 2 ☐ Daughter Education 1 Elem. 1 2 3 4 5 6 7 8 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ 2 High 1 2 3 4 ☐ ☐ ☐ ☐ 3 College 1 2 3 4 5 6+ ☐ ☐ ☐ ☐ ☐ ☐ 00 ☐ Never attended school 99 ☐ Don't know	
	1 ☐ Son 2 ☐ Daughter Education 1 Elem. 1 2 3 4 5 6 7 8 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ 2 High 1 2 3 4 ☐ ☐ ☐ ☐ 3 College 1 2 3 4 5 6+ ☐ ☐ ☐ ☐ ☐ ☐ 00 ☐ Never attended school 99 ☐ Don't know	
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84. What is your Social Security number?		
Continue with questions on next page		
Notes		

95. (Ask at the completion of the interview. If more than one respondent in the household, ask for each.)

We would like to contact you again next year at this time to bring this information up to date. Would you please give me the name, address and telephone number of two

relatives or friends who will always know where you can be reached even if you move away?

Enter information below and transcribe to Household Record Card.

Now I have a few questions about the education and work experience of the other family members living here.

Line number	NAME List below all persons living here who are related to respondent. Enter the line number from the Household Record Card in column 85.	RELATIONSHIP TO RESPONDENT (Example: wife, son, daughter-in-law, brother, etc.)	Persons 6-24 years old			Persons 25 years old and over		Persons 14 years old and over					
			Is ... attending or enrolled in school? Circle Y - Yes N - No	If "Yes" - What grade (year)? If "No" - What is the highest grade (year) ever attended?	Did ... finish this grade (year)?	What is the highest grade (year) of regular school ... has ever attended?	Did ... finish this grade (year)?	In 1965, how many weeks did ... work either full or part time (not counting work around the house)?	In the weeks that ... worked, how many hours did ... usually work per week?	What kind of work was ... doing in 1965? (If more than one, record the longest)			
											87	88	89
85	86a	86B Respondent											
			Y N		Y N		Y N						
			Y N		Y N		Y N						
			Y N		Y N		Y N						
			Y N		Y N		Y N						
			Y N		Y N		Y N						
			Y N		Y N		Y N						
			Y N		Y N		Y N						
			Y N		Y N		Y N						
			Y N		Y N		Y N						

95. (Ask at the completion of the interview. If more than one respondent in the household, ask for each.) We would like to contact you again next year at this time to bring this information up to date. Would you please give me the name, address, and telephone number of two relatives or friends who will always know where you can be reached even if you move away? Enter information below and transcribe to Household Record Card.

Name	Relationship to respondent	Address	Telephone number
1.			
2.			

Notes

NOTICE - Your report to the Census Bureau is confidential by law (Title 13, U.S. Code). It may be seen only by sworn Census employees and may be used only for statistical purposes.

FORM LGT-151
14-20-71

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

**NATIONAL LONGITUDINAL SURVEYS
SURVEY OF WORK EXPERIENCE
OF MATURE MEN**

1971

(001) 1 Respondent a noninterview in 1969 - GO to page 35

METHODS OF LOCATING RESPONDENT WHO HAS MOVED				RECORD OF CALLS		
Successful		Unsuccessful		Date	Time	Comments
(002)	1	2	New occupants		a.m.	
(003)	1	2	Neighbors		p.m.	
(004)	1	2	Apartment house manager		a.m.	
(005)	1	2	Post office		p.m.	
(006)	1	2	School		a.m.	
(007)	1	2	Persons listed on information sheet		p.m.	
(008)	1	2	Other - Specify <u>7</u>		a.m.	
					p.m.	

RECORD OF INTERVIEW					
Date completed Month Day Year			Interview time		Interviewed by
			Began	Ended	
(009)			a.m.	a.m.	
Length of interview (minutes)			p.m.	p.m.	
(010)					

NONINTERVIEW REASON	
(011)	Unable to contact respondent - Specify
6	Temporarily absent - Give return date
8	Institutionalized - Specify type
9	Refused
0	Deceased
A	Other - Specify

TRANSCRIPTION FROM HOUSEHOLD RECORD CARD						
Item 13 - Marital status of respondent						
(012)	1	Married, spouse present	3	Widowed	5	Separated
	2	Married, spouse absent	4	Divorced	6	Never married
(013)	If respondent has moved, enter new address					
	1. Number and street					
(014)						
(015)	2. City	3. County	4. State	5. ZIP code		

I. CURRENT LABOR FORCE STATUS AND WORK HISTORY		
1. What were you doing most of LAST WEEK - working, looking for work, or something else? (016) 1 ☐ WK - Working - SKIP to 2b 2 ☐ J - With a job but not at work 3 ☐ LK - Looking for work 4 ☐ S - Going to school 5 ☐ R - Retired 6 ☐ U - Unable to work - SKIP to 5 7 ☐ OT - Other - Specify →	2a. Did you do any work at all LAST WEEK, not counting work around the house? (NOTE: If farm or business operator in household, ask about unpaid work.) (019) 1 ☐ Yes 2 ☐ No - SKIP to 3a	(If "J" in 1, SKIP to b.) 3a. Did you have a job (or business) from which you were temporarily absent or on layoff LAST WEEK? (024) 1 ☐ Yes 2 ☐ No - SKIP to 4a
2c. Do you USUALLY work 35 hours or more a week at this job? (017) 1 ☐ Yes - What is the reason you worked less than 35 hours LAST WEEK? 2 ☐ No - What is the reason you USUALLY work less than 35 hours a week? (Mr. the appropriate reason) (018) 1 ☐ Lack work 2 ☐ Material shortage 3 ☐ Plant or machine repair 4 ☐ New job started during week 5 ☐ Job terminated during week 6 ☐ Could find only part-time work 7 ☐ Holiday (legal or religious) 8 ☐ Labor dispute 9 ☐ Bad weather 10 ☐ Own illness 11 ☐ Illness of family member 12 ☐ On vacation 13 ☐ Too busy with school, personal business, etc. 14 ☐ Did not want full-time work 15 ☐ Full-time work week under 35 hours 16 ☐ Other reason - Specify → (SKIP to 6a and enter job worked at last week.)	2b. How many hours did you work LAST WEEK at all jobs? (020) _____ Hours CHECK ITEM A Respondent worked - (021) 1 ☐ 49 hours or more - SKIP to 6a and enter job worked at last week 2 ☐ 1-34 hours - ASK c 3 ☐ 35-48 hours - ASK d 2d. Did you lose any time or take any time off LAST WEEK for any reason such as illness, holiday, or slack work? Yes - How many hours did you take off? (022) _____ Hours 0 ☐ No (Correct 2b if lost time not already deducted; if 2b reduced below 35, fill 2c, otherwise SKIP to 6.) 2e. Did you work any overtime or at more than one job LAST WEEK? Yes - How many extra hours did you work? (023) _____ Hours 0 ☐ No (Correct 2b if extra hours not already included and SKIP to 6a.)	3b. Why were you absent from work LAST WEEK? (025) 1 ☐ Own illness 2 ☐ On vacation 3 ☐ Bad weather 4 ☐ Labor dispute 5 ☐ New job to begin within 30 days - ASK 4c and 4d (2) 6 ☐ Temporary layoff (under 30 days) 7 ☐ Indefinite layoff (30 days or more or no definite recall date) - ASK 4d (3) 8 ☐ Other - Specify → 3c. Are you getting wage, or salary for any of the time off LAST WEEK? (026) 1 ☐ Yes 2 ☐ No 3 ☐ Self-employed 3d. Do you usually work 35 hours or more a week at this job? (027) 1 ☐ Yes 2 ☐ No (SKIP to 6a and enter job held last week.)
Notes		

I. CURRENT LABOR FORCE STATUS AND WORK HISTORY - Continued	
If "LK" in I, SKIP to b1 4a. Have you been looking for work during the past 4 weeks? (028) 1 Yes 2 No - SKIP to 5 b. What have you been doing in the last 4 weeks to find work? (Mark all methods used; do not read list) (029) 0 Nothing - SKIP to 5 Checked with 1 State employment agency 2 Private employment agency 3 Employer directly 4 Friends or relatives 5 Placed or answered ads 6 Other - Specify - e.g. MDTA, union or professional register, etc. → c. Why did you start looking for work? Was it because you lost or quit a job at that time (pause) or was there some other reason? (030) 1 Lost job 2 Quit job 3 Wanted temporary work 4 Health improved 5 Other - Specify → d.(1) How many weeks have you been looking for work? (2) How many weeks ago did you start looking for work? (3) How many weeks ago were you laid off? (031) _____ Weeks e. Have you been looking for full-time or part-time work? (032) 1 Full-time 2 Part-time f. Is there any reason why you could not take a job LAST WEEK? (033) Yes → 1 Already has a job 2 Temporary illness 3 Going to school 4 Other - Specify → 5 No g. When did you last work at a regular job or business lasting two consecutive weeks or more, either full-time or part-time? ☐ Date of last interview or later (item I16R on Information Sheet) - Specify → Month Day Year (034) _____ - SKIP to 14a on page 7 2 All others - SKIP to 15a on page 7	5. When did you last work at a regular job or business lasting two consecutive weeks or more, either full-time or part-time? Date of last interview or later (item I16R on Information Sheet) - Specify → Month Day Year (035) _____ - SKIP to 14a on page 7 2 Before date of last interview (item I16R on Information Sheet) and "unable" now and "unable" in item I13R on the Information Sheet - SKIP to 38 on page 12 3 All others - SKIP to 15a on page 7 (036) DESCRIPTION OF JOB OR BUSINESS 6a.(1) For whom did you work? (Name of company, business, organization or other employer) _____ (2) Is this the full and complete name of the company? Yes _____ No - What is the full and complete name? _____ (3) Do you ever refer to the company by any other name? Yes - What is that name? _____ No _____ (4) To the best of your knowledge, has the name of the company changed in the past five years? Yes - What was the name? _____ No _____ (037) _____ b. In what city and State is . . . located? _____ City _____ State (038) _____ c. What kind of business or industry is this? (For example: TV and radio manufacturer, retail shoe store, State Labor Department, farm) _____ d. Were you - (039) 10 P - An employee of a PRIVATE company, business, or individual for wages, salary, or commissions? 20 G - A GOVERNMENT employee (Federal, State, county, or local)? 30 O - Self-employed in your OWN business, professional practice, or farm? (If not a farm) Is this business incorporated? 31 Yes 32 No 40 WP - Working WITHOUT PAY in family business or farm? (040) _____ e. What kind of work were you doing? (For example: electrical engineer, waiter, stock clerk, farmer) _____ f. What were your most important activities or duties? (For example: selling cars, operating printing press, finishing concrete, cleaning buildings) _____ g. What was your job title? _____ h. When did you start working for (entry in 6a)? (041) _____ Month Day Year

1. CURRENT LABOR FORCE STATUS AND WORK HISTORY - Continued

CHECK ITEM B	"P" or "G" in item 6d - ASK 7a "O" or "WP" in item 6d - SKIP to 7m
7a. Altogether, how much do you usually earn at this job before deductions?	7a. (042) \$ _____ per: $\nearrow$ (Dollars) (Cents) (043) 1 Hour (044) \$ _____ 00 per: $\nearrow$ (Dollars only) (045) 2 Day 3 Week 4 Biweekly 5 Month 6 Year 7 Other - Specify _____
b. How many hours per week do you usually work at this job?	b. (046) _____ Hours
c. Do you receive extra pay when you work over a certain number of hours?	c. (047) 1 Yes - ASK d 2 No 3 No, but received compensating time off 4 Never work overtime } SKIP to f
d. After how many hours do you receive extra pay?	d. (048) _____ Hours per day (049) _____ Hours per week
e. For all hours worked over (entry in d) are you paid straight time, time and one-half, double time or what?	e. (050) 1 Compensating time off 2 Straight time 3 Time and one-half 4 Double time 5 Other - Specify _____
f. Are your wages (salary) on this job set by a collective bargaining agreement between your employer and a union or employee association?	f. (051) 1 Yes - ASK g 2 No - SKIP to i
g. What is the name of the union or employee association?	g. (052) _____
h. Are you a member of that union or employee association?	h. (053) 1 Yes 2 No
i. Do you generally work the same days each week and the same hours each day?	i. (054) 1 Yes - ASK j 2 No - SKIP to k
j. What hours do you usually work?	j. (055) 1 Regular day shift 2 Regular evening shift 3 Regular night shift 4 Split shift
k. Some people would like to work more hours a week if they could be paid for it. Others would prefer to work fewer hours a week even if they earned less. Would you prefer more hours and more pay, fewer hours and less pay, or about the same number of hours at the same pay?	k. (056) 1 More hours and more pay 2 Fewer hours and less pay 3 Same hours at the same pay - SKIP to 8a } ASK l
l. About how many hours would you like to work?	l. (057) _____ Hours - SKIP to 8a
m. How many hours per week do you usually work at this job?	m. (058) _____ Hours per week

I CURRENT LABOR FORCE STATUS - Continued	
8a. How long does it usually take you to get to work? b. What means of transportation do you usually use to get to work? (Mark as many boxes as apply) If "Other," specify here → c.(1) What is the total round trip cost of any parking fees or tolls you have to pay when you drive your own auto? (2) How many miles do you go by auto round trip?	8a. Hours Minutes b. 059 Hours Minutes 060 1 Own auto - ASK c 2 Ride with someone else 3 Bus or streetcar 4 Subway or elevated 5 Railroad 6 Taxicab 7 Walk only 8 Other } SKIP to d } SKIP to Check Item C c. (1) 061 \$ (Dollars) (Cents) per → 062 0 No cost 1 Day 2 Week 3 Month (2) 063 Miles 064 \$ (Dollars) (Cents) per → 065 0 No cost 1 Day 2 Week 3 Month
Only box 1 marked in b - SKIP to Check Item C Box 1 and any of boxes 2-6 marked in b - ASK d d. What is the total cost of the round trip by (means of transportation in b other than own auto)?	
CHECK ITEM C	☐ Entry in 3b - SKIP to 9d ☐ Item 3b is blank, and ☐ Entry in 6d is "P" or "G" - ASK 9a ☐ Entry in 6d is "O" or "WP" - SKIP to 9c
9a. Did you work for more than one employer last week? b. In addition to working for wages and salary did you operate your own farm, business, or profession last week? c. In addition to this work, did you do any work for wages or salary last week? d. Did you have any other job at which you did not work at a. last week?	9a. 066 1 Yes - SKIP to 10a 2 No - ASK b b. 067 1 Yes - SKIP to 10a 2 No - SKIP to d c. 068 1 Yes - SKIP to 10a 2 No - ASK d d. 069 1 Yes - ASK 10a 2 No - SKIP to 11a
Notes	

I. CURRENT LABOR FORCE STATUS AND WORK HISTORY - Continued

10a. For whom did you work in addition to (entry in 6a)?
(Name of company, business organization or other employer)

10a. (070) _____

b. What kind of business or industry is this?
(For example: TV and radio manufacturer, retail shoe store, State Labor Department, farm)

b. (071) _____

c. Were you -

- c. (072) 1 ☐ P - An employee of a PRIVATE company, business or individual for wages, salary, or commission?
2 ☐ G - A GOVERNMENT employee (Federal, State, county or local)?
3 ☐ O - Self-employed in your OWN business, professional practice or farm?
4 ☐ WP - Working WITHOUT PAY in family business or farm?

d. What kind of work were you doing? (For example: electrical engineer, waiter, stock clerk, farmer)

d. (073) _____

e. What were your most important activities or duties?
(For example: selling cars, operating printing press, finishing concrete, cleaning buildings)

e. _____

f. What was your job title?

f. _____

CHECK ITEM D

- ☐ If "P" or "G" in item 10c - ASK g
☐ If "O" or "WP" in item 10c - SKIP to h

10g. Altogether how much do you usually earn at this job before deductions?

10g. (074)

\$ _____ per: ☐ (Dollars) ☐ (Cents)

(075) 1 ☐ Hour

(076) \$ _____ 00 per: ☐ (Dollars only)

(077) 2 ☐ Day

3 ☐ Week

4 ☐ Biweekly

5 ☐ Month

6 ☐ Year

7 ☐ Other - Specify _____

h. How many hours per week do you usually work at this job?

h. (078)

_____ Hours per week

i. When did you start working as a (Entry in 10d) for (Entry in 10a)?

i. (079)

Month Day Year

11a. Before you began to work as a (Entry in 6e) for (Entry in 6a), did you do any other kind of work for (Entry in 6a)?

11a. (080)

- 1 ☐ Yes - SKIP to 12a
2 ☐ No

b. Excluding paid vacations and paid sick leave, during the time you have worked at this job, were there any full weeks in which you didn't work (since date of last interview)?

b. (081)

- ☐ Yes - How many weeks? ☐
_____ Weeks
0 ☐ No - SKIP to Check Item E

c. Why were you not working during these _____ weeks?

c. (082)

- 1 ☐ Personal, family reasons
2 ☐ Own illness
3 ☐ Did not want to work
4 ☐ Layoff
5 ☐ Labor dispute
6 ☐ Other

I. CURRENT LABOR FORCE STATUS AND WORK HISTORY - Continued															
CHECK ITEM E	Refer to item 6h on page 3. ☐ Current job started date of last interview or later - SKIP to 13 ☐ Current job started before date of last interview - SKIP to Check Item L														
12a. When did you start working as a (entry in 6e) for (entry in 6a)?	12a. <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Month</td> <td style="width: 20px; text-align: center;">Day</td> <td style="width: 20px; text-align: center;">Year</td> </tr> <tr> <td style="text-align: center;">(083)</td> <td style="text-align: center;">(083)</td> <td style="text-align: center;">(083)</td> </tr> </table>	Month	Day	Year	(083)	(083)	(083)								
Month	Day	Year													
(083)	(083)	(083)													
b. Excluding vacations and paid sick leave, during the time you have worked as a (entry in 6e) for (entry in 6a), were there any full weeks in which you didn't work, (since date of last interview)?	b. ☐ Yes - How many weeks? (084) _____ Weeks ☐ No - SKIP to Check Item F														
c. Why were you not working during these _____ weeks?	c. (085) <table style="border: none;"> <tr><td>1</td><td>Personal, family reasons</td></tr> <tr><td>2</td><td>Own illness</td></tr> <tr><td>3</td><td>Did not want to work</td></tr> <tr><td>4</td><td>Layoff</td></tr> <tr><td>5</td><td>Labor dispute</td></tr> <tr><td>6</td><td>Other - Specify →</td></tr> </table>	1	Personal, family reasons	2	Own illness	3	Did not want to work	4	Layoff	5	Labor dispute	6	Other - Specify →		
1	Personal, family reasons														
2	Own illness														
3	Did not want to work														
4	Layoff														
5	Labor dispute														
6	Other - Specify →														
CHECK ITEM F	Item 12e is date of last interview or later - ASK 13 Item 12a is before date of last interview - SKIP to Check Item L on page 10														
13. Just before you started on this job, was there a period of a week or more in which you were not working?	13. (086) <table style="border: none;"> <tr><td>1</td><td>Yes - SKIP to 25</td></tr> <tr><td>2</td><td>No - SKIP to 16a</td></tr> </table>	1	Yes - SKIP to 25	2	No - SKIP to 16a										
1	Yes - SKIP to 25														
2	No - SKIP to 16a														
14a. You said you last worked at a regular job on (entry in 4g or 5i). Interviewer: Use calendar to determine the number of weeks since respondent last worked. That would be about _____ weeks since you last worked. In how many of these weeks were you looking for work or on layoff from a job?	14a. <table style="border: none;"> <tr> <td>(1) (087) _____ Weeks since last worked</td> </tr> <tr> <td>(2) (088) _____ Weeks looking or on layoff</td> </tr> </table>	(1) (087) _____ Weeks since last worked	(2) (088) _____ Weeks looking or on layoff												
(1) (087) _____ Weeks since last worked															
(2) (088) _____ Weeks looking or on layoff															
CHECK ITEM G	14a (1) is equal to 14a (2) - SKIP to 16 14a (1) is greater than 14a (2) - ASK b														
14b. That leaves _____ weeks that you were not working or looking for work. What would you say was the main reason you were not looking for work during that period? If "Other," specify here →	14b. (089) _____ Weeks (090) <table style="border: none;"> <tr><td>1</td><td>Personal, family reasons</td></tr> <tr><td>2</td><td>Ill or disabled, unable to work</td></tr> <tr><td>3</td><td>Did not want to work</td></tr> <tr><td>4</td><td>Retired</td></tr> <tr><td>5</td><td>Couldn't find work</td></tr> <tr><td>6</td><td>Vacation</td></tr> <tr><td>7</td><td>Other</td></tr> </table> } SKIP to 16	1	Personal, family reasons	2	Ill or disabled, unable to work	3	Did not want to work	4	Retired	5	Couldn't find work	6	Vacation	7	Other
1	Personal, family reasons														
2	Ill or disabled, unable to work														
3	Did not want to work														
4	Retired														
5	Couldn't find work														
6	Vacation														
7	Other														
15a. Since (date of last interview) in how many different weeks did you do any work at all?	15a. (091) _____ Weeks ☐ None														
b. Since (date of last interview) have you spent any weeks looking for work or on layoff from a job?	b. Yes - How many weeks? (092) _____ Weeks ☐ No														
CHECK ITEM H	Interviewer: Use calendar to determine the number of weeks since date of las. interview. (1) (093) _____ Weeks since date of last interview (2) (094) _____ Weeks working, on layoff, or looking for work (1) is equal to (2) - SKIP to Check Item L on Page 10 (1) is greater than (2) - ASK 15c														
15c. What would you say was the main reason you were not working or looking for work during (the rest of) that time? If "Other," specify here →	15c. (095) <table style="border: none;"> <tr><td>1</td><td>Personal, family reasons</td></tr> <tr><td>2</td><td>Ill or disabled, unable to work</td></tr> <tr><td>3</td><td>Did not want to work</td></tr> <tr><td>4</td><td>Retired</td></tr> <tr><td>5</td><td>Couldn't find work</td></tr> <tr><td>6</td><td>Vacation</td></tr> <tr><td>7</td><td>Other</td></tr> </table> } SKIP to Check Item L on Page 10	1	Personal, family reasons	2	Ill or disabled, unable to work	3	Did not want to work	4	Retired	5	Couldn't find work	6	Vacation	7	Other
1	Personal, family reasons														
2	Ill or disabled, unable to work														
3	Did not want to work														
4	Retired														
5	Couldn't find work														
6	Vacation														
7	Other														

I. CURRENT LABOR FORCE STATUS AND WORK HISTORY - Continued	
16. Now let's talk about - The job you worked at before you started to work as a (ENTRY IN 6a OR 16a) for (ENTRY IN 6a OR 16a) (1) The last job you worked at; that is, the one which ended on (ENTRY IN 4g OR 5)	
a. For whom did you work? (Name of company, business, organization or other employer)	16a. (096) ☐ Same as 6a - SKIP to 16a
b. In what city and State is . . . located?	b. (097) City, State
c. What kind of business or industry is this? (For example: TV and radio manufacturer, retail shoe store, State Labor Department, farm)	c. (098)
d. Class of worker	d. (099) 1 ☐ P 2 ☐ G 3 ☐ O 4 ☐ WP
e. What kind of work were you doing? (For example: stock clerk, high school English teacher, car salesman)	e. (100)
f. What were your most important activities or duties? (For example: selling clothing, keeping account books, teaching mathematics, finishing concrete)	f.
g. What was your job title?	g.
17a. Altogether, how much did you usually earn at this job before all deductions?	17a. (101) \$
b. How many hours per week did you usually work at this job?	b. (102) per Hours
18a. When did you start working as a (ENTRY IN 16a) for (ENTRY IN 16a)?	18a. (104) Month Day Year
b. When did you stop working as a (ENTRY IN 16a) for (ENTRY IN 16a)?	b. (105) Month Day Year X ☐ Still working there - SKIP to 20a
19a. Why did you happen to leave this job (change the kind of work you were doing)?	19a.
b. Did you have a new job lined up before you left this one?	b. (107) 1 ☐ Yes 2 ☐ No
20a. Excluding paid vacations and paid sick leave, during the time you worked at this job were there any full weeks in which you didn't work on this job (since date of last interview)?	20a. ☐ Yes - How many weeks? (108) ☐ Weeks - ASK b 0 ☐ No - SKIP to 21
b. Why were you not working at this job during these . . . weeks?	b. (109) 1 ☐ Personal, family reasons 4 ☐ Layoff 2 ☐ Own illness 5 ☐ Labor dispute 3 ☐ Did not want to work 6 ☐ Retired 7 ☐ Other - Specify
c. Were you working for someone else during this period(s)?	c. (110) 1 ☐ Yes - GO to next column and record information about this job 2 ☐ No
21. Did you do any other kind of work for (ENTRY IN 16a) just before (DATE IN 18a)?	21. (111) 1 ☐ Yes - GO to next column and record information about this job 2 ☐ No
CHECK ITEM I	Item 18a is: 1. Date of last interview or later 2. Before date of last interview
22. Have you worked for anyone else (since date of last interview)?	22. (112) 1 ☐ Yes - GO to next column and record information 2 ☐ No - SKIP to Check Item L on page 10
23. While you were working for (ENTRY IN 16a), were you also working for someone else?	23. (113) 1 ☐ Yes - GO to next column and record information about simultaneous job 2 ☐ No - ASK 24
24. JUST before you started working as a (ENTRY IN 16a) for (ENTRY IN 16a) was there a period of a week or more in which you were not working?	24. (114) 1 ☐ Yes - ASK 25 2 ☐ No - GO to next column and record information about previous job
25. When did this period in which you were not working start?	25. (115) Month Day Year X ☐ Never worked before
26a. Interviewer: Determine number of weeks not working. If item 25 is before date of last interview, count only weeks since that time.	26a. (116) Weeks not working
b. That would be about . . . weeks that you were not working. How many of those weeks were you looking for work or on layoff from a job?	b. (117) Weeks looking or on layoff
CHECK ITEM J	1. 26a is equal to 26b 2. 26a is greater than 26b
27. That leaves . . . weeks that you were not working or looking for work. What would you say was the main reason that you were not looking for work during that period?	27. (118) 1 ☐ Personal, family reasons 5 ☐ Couldn't find work 2 ☐ Ill or disabled, unable to work 6 ☐ Vacation 3 ☐ Did not want to work 7 ☐ Other - Specify 4 ☐ Retired
CHECK ITEM K	1. Item 25 is date of last interview or later 2. Item 25 is before date of last interview
	1. ☐ GO to next column and record information about previous job 2. ☐ SKIP to Check Item L on page 10

I. CURRENT LABOR FORCE STATUS AND WORK HISTORY - Continued					
(2)		(3)		(4)	
16a. (119) ☐ Never worked before - SKIP to Check Item L ☐ Same as _____ - SKIP to 16a	(142) ☐ Never worked before - SKIP to Check Item L ☐ Same as _____ - SKIP to 16a	(165) ☐ Never worked before - SKIP to Check Item L ☐ Same as _____ - SKIP to 16a			
b. (120) _____ City, State	(143) _____ City, State	(166) _____ City, State			
c. (121) _____	(144) _____	(167) _____			
d. (122) 1 ☐ P 2 ☐ G 3 ☐ O 4 ☐ WP	(145) 1 ☐ P 2 ☐ G 3 ☐ O 4 ☐ WP	(168) 1 ☐ P 2 ☐ G 3 ☐ O 4 ☐ WP			
e. (123) _____	(146) _____	(169) _____			
f. _____	_____	_____			
g. _____	_____	_____			
7a. (124) \$ _____	(147) \$ _____	(170) \$ _____			
(125) _____ per _____	(148) _____ per _____	(171) _____ per _____			
b. (126) _____ Hours	(149) _____ Hours	(172) _____ Hours			
9a. (127) _____ Month Day Year	(150) _____ Month Day Year	(173) _____ Month Day Year			
b. (128) _____ Month Day Year x ☐ Still working there - SKIP to 20a	(151) _____ Month Day Year x ☐ Still working there - SKIP to 20a	(174) _____ Month Day Year x ☐ Still working there - SKIP to 20a			
9a. (129) _____	(152) _____	(175) _____			
b. (130) 1 ☐ Yes 2 ☐ No	(153) 1 ☐ Yes 2 ☐ No	(176) 1 ☐ Yes 2 ☐ No			
10a. (131) ☐ Yes - How many weeks? _____ Weeks - ASK b 0 ☐ No - SKIP to 21	(154) ☐ Yes - How many weeks? _____ Weeks - ASK b 0 ☐ No - SKIP to 21	(177) ☐ Yes - How many weeks? _____ Weeks - ASK b 0 ☐ No - SKIP to 21			
b. (132) 1 ☐ Personal, family reasons 2 ☐ Own illness 3 ☐ Did not want to work 4 ☐ Layoff 5 ☐ Labor dispute 6 ☐ Retired 7 ☐ Other - Specify	(155) 1 ☐ Personal, family reasons 2 ☐ Own illness 3 ☐ Did not want to work 4 ☐ Layoff 5 ☐ Labor dispute 6 ☐ Retired 7 ☐ Other - Specify	(178) 1 ☐ Personal, family reasons 2 ☐ Own illness 3 ☐ Did not want to work 4 ☐ Layoff 5 ☐ Labor dispute 6 ☐ Retired 7 ☐ Other - Specify			
c. (133) 1 ☐ Yes - GO to next column and record information about this job 2 ☐ No	(156) 1 ☐ Yes - GO to next column and record information about this job 2 ☐ No	(179) 1 ☐ Yes - GO to next column and record information about this job 2 ☐ No			
21. (134) 1 ☐ Yes - GO to next column and record information about this job 2 ☐ No	(157) 1 ☐ Yes - GO to next column and record information about this job 2 ☐ No	(180) 1 ☐ Yes - GO to next column and record information about this job 2 ☐ No			
1. ☐ SKIP to 23 ASK 22	☐ SKIP to 23 ASK 22	☐ SKIP to 23 ASK 22			
22. (135) 1 ☐ Yes - GO to next column and record information 2 ☐ No - SKIP to Check Item L on page 10	(158) 1 ☐ Yes - GO to next column and record information 2 ☐ No - SKIP to Check Item L on page 10	(181) 1 ☐ Yes - GO to next column and record information 2 ☐ No - SKIP to Check Item L on page 10			
23. (136) 1 ☐ Yes - GO to next column and record information about simultaneous job 2 ☐ No - ASK 24	(159) 1 ☐ Yes - GO to next column and record information about simultaneous job 2 ☐ No - ASK 24	(182) 1 ☐ Yes - GO to next column and record information about simultaneous job 2 ☐ No - ASK 24			
24. (137) 1 ☐ Yes - ASK 25 2 ☐ No - GO to next column and record information about previous job	(160) 1 ☐ Yes - ASK 25 2 ☐ No - GO to next column and record information about previous job	(183) 1 ☐ Yes - ASK 25 2 ☐ No - GO to next column and record information about previous job			
25. (138) _____ Month Day Year x ☐ Never worked before	(161) _____ Month Day Year x ☐ Never worked before	(184) _____ Month Day Year x ☐ Never worked before			
6a. (139) _____ Weeks not working	(162) _____ Weeks not working	(185) _____ Weeks not working			
b. (140) _____ Weeks looking or on layoff	(163) _____ Weeks looking or on layoff	(186) _____ Weeks looking or on layoff			
1. ☐ SKIP to Check Item K	☐ SKIP to Check Item K	☐ SKIP to Check Item K			
2. ☐ ASK 27	☐ ASK 27	☐ ASK 27			
27. (141) 1 ☐ Personal, family reasons 2 ☐ Ill or disabled, unable to work 3 ☐ Did not want to work 4 ☐ Retired 5 ☐ Couldn't find work 6 ☐ Vacation 7 ☐ Other - Specify	(164) 1 ☐ Personal, family reasons 2 ☐ Ill or disabled, unable to work 3 ☐ Did not want to work 4 ☐ Retired 5 ☐ Couldn't find work 6 ☐ Vacation 7 ☐ Other - Specify	(187) 1 ☐ Personal, family reasons 2 ☐ Ill or disabled, unable to work 3 ☐ Did not want to work 4 ☐ Retired 5 ☐ Couldn't find work 6 ☐ Vacation 7 ☐ Other - Specify			
1. ☐ GO to next column and record information about previous job 2. ☐ SKIP to Check Item L on page 10	☐ GO to next column and record information about previous job ☐ SKIP to Check Item L on page 10	☐ GO to next column and record information about previous job ☐ SKIP to Check Item L on page 10			

II. WORK ATTITUDES	
CHECK ITEM L	Respondent is in - ☐ Labor Force Group A ("WK" or "J" in I or "Yes" in 2a or 3a) - SKIP to Check Item M ☐ Labor Force Group B ("LK" in I or "Yes" in 4a) - SKIP to 30a ☐ Labor Force Group C (All others) - ASK 28a
28a. Do you intend to look for work of any kind in the next 12 months? b. When do you intend to start looking for work? c. What kind of work do you think you will look for? d. What will you do to find work? (Mark as many as apply)	28a. (257) ☐ 1 Yes - definitely } ASK b ☐ 2 Yes - probably } ASK b ☐ Maybe - What does it depend on? _____ } SKIP to 29a ☐ 3 No } SKIP to 29a ☐ 4 Don't know } SKIP to 29a b. (258) _____ Month c. (259) ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ d. (260) Check with ☐ 1 State employment agency (or counselor) ☐ 2 Private employment agency ☐ 3 Employer directly ☐ 4 Friends or relatives ☐ 5 Place or answer ads ☐ 6 School employment service ☐ 7 Other - Specify _____
29a. Why would you say that you are not looking for work at this time? b. If you were offered a job by some employer in THIS AREA, do you think you would take it? c. How many hours per week would you be willing to work? d. What kind of work would it have to be? e. What would the wage or salary have to be?	29a. (261) ☐ 1 Personal, family reasons ☐ 2 Health reasons ☐ 3 Does not want to work at this time of year ☐ 4 Retired ☐ 5 Couldn't find work ☐ 6 Believes no work available ☐ 7 Other or no reason b. (262) ☐ 1 Yes, definitely } ASK c ☐ 2 Yes, if it is something I can do } ASK c ☐ 3 Yes, if satisfactory wage } ASK c ☐ 4 Yes, if satisfactory location } ASK c ☐ 5 Yes, if satisfactory hours } ASK c ☐ 6 Yes, if other _____ } ASK c ☐ 7 No, health won't permit } SKIP to 38 on page 12 ☐ 8 No, don't want to work, retired } SKIP to 38 on page 12 ☐ 9 No, don't need the money } SKIP to 38 on page 12 ☐ 0 No, other _____ } SKIP to 38 on page 12 c. (263) ☐ 1 1-4 ☐ 2 5-14 ☐ 3 15-24 ☐ 4 25-34 ☐ 5 35-40 ☐ 6 41-48 ☐ 7 49 or more d. (264) ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ e. (265) \$ _____ (Dollars) . _____ (Cents) per: ➤ (266) ☐ Hour (267) \$ _____ (Dollars only) . 00 per: ➤ (268) ☐ 2 Day ☐ 3 Week ☐ 4 Biweekly ☐ 5 Month ☐ 6 Year ☐ 7 Any pay ☐ 8 Other - Specify _____

SKIP to 38, on page 12

II. WORK ATTITUDES - Continued

30a. What type of work are you looking for? b. What would the wage or salary have to be for you to be willing to take it? c. Are there any restrictions, such as hours or location of job that would be a factor in your taking a job? d. What are these restrictions? e. If you were offered a job in this area at the same pay as your last job, would you take it?	30a. (269) (270) \$ (Dollars) (Cents) per: (271) ☐ Hour (272) \$ (Dollars only) 00 per: (273) ☐ Day ☐ Week ☐ Biweekly ☐ Month ☐ Year ☐ Any pay ☐ Other - Specify c. (274) ☐ Yes - ASK d ☐ No - SKIP to e d. (275) e. (276) ☐ Yes, definitely ☐ It depends on type of work ☐ It depends if satisfied with company ☐ It depends - Other - Specify below ☐ No, pay not high enough ☐ No, other - Specify
CHECK ITEM M	Respondent - ☐ Was in Labor Force Group A in 1969 (I13R on Information Sheet) - SKIP to 32a ☐ Was in Labor Force Group B in 1969 (I13R on Information Sheet) - SKIP to 33 ☐ Was in Labor Force Group C in 1969 (I13R on Information Sheet) - ASK 31
31. At this time two years ago, you were not looking for work. What made you decide to take a job?	31. (277) ☐ Recovered from illness ☐ Bored ☐ Heard about a job I was qualified for ☐ Completed education ☐ Needed money ☐ Other - Specify
32a. The last time we talked to you was two years ago. Would you say you like your present job more, less, or about the same as the job you held at that time? b. What would you say is the main reason you like your present job (more, less)?	32a. (278) ☐ More } ASK b ☐ Less } ☐ Same - SKIP to 33 b. (279)
33. How do you feel about the job you have now? Do you like it very much, like it fairly well, dislike it somewhat, or dislike it very much?	33. (280) ☐ Like it very much ☐ Like it fairly well ☐ Dislike it somewhat ☐ Dislike it very much
34. What are the things you like best about your job?	34. (281) (282) (283)

SKIP to
38 on
page 12

II. WORK ATTITUDES - Continued

35. What are the things about your job that you don't like?	35. (284) (285) (286)																								
36a. Suppose someone IN THIS AREA offered you a job in the same line of work you're in now. How much would the new job have to pay for you to be willing to take it? <i>(If amount given per hour, record dollars and cents. Otherwise, round to the nearest dollar.)</i>	36a. (287) \$ (Dollars) . (Cents) per: (288) 1 ☐ Hour (289) \$ (Dollars only) . 00 per: (290) 2 ☐ Day 3 ☐ Week 4 ☐ Biweekly 5 ☐ Month 6 ☐ Year 7 ☐ Other - Specify (291) 8 ☐ I wouldn't take it at any conceivable pay 9 ☐ I would take a steady job at same or less pay 10 ☐ Would accept job; don't know specific amount 11 ☐ Don't know 12 ☐ Other																								
b. If someone IN THIS AREA offered you a job at your present rate of pay in a different line of work for which you are qualified, do you think you would take it?	b. (292) 1 ☐ Yes - ASK c 2 ☐ No - SKIP to 37																								
c. What kind of work would you accept?	c. (293)																								
37. What if this job was in the same line of work you are in now, but was IN SOME OTHER PART OF THE COUNTRY - how much would it have to pay in order for you to be willing to take it? <i>(If amount given per hour, record dollars and cents. Otherwise, round to the nearest dollar.)</i>	37. (294) \$ (Dollars) . (Cents) per: (295) 1 ☐ Hour (296) \$ (Dollars only) . 00 per: (297) 2 ☐ Day 3 ☐ Week 4 ☐ Biweekly 5 ☐ Month 6 ☐ Year 7 ☐ Other - Specify (298) 8 ☐ I wouldn't take it at any conceivable pay 9 ☐ I would take a steady job at same or less pay 10 ☐ Would accept job; don't know specific amount 11 ☐ Depends on location, cost of living 12 ☐ Don't know 13 ☐ Other																								
38. Now I'd like your opinion about women working. People have different ideas about whether married women should work. Here are three statements about a married woman with children between the ages of 6 and 12. (HAND CARD TO RESPONDENT.) In each case, how do you feel about such a woman taking a full-time job outside the home: Is it definitely all right, probably all right, probably not all right, or definitely not all right?																									
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 40%;">Statements</th> <th style="width: 10%;">Definitely all right</th> <th style="width: 10%;">Probably all right</th> <th style="width: 10%;">Probably not all right</th> <th style="width: 10%;">Definitely not all right</th> <th style="width: 10%;">No opinion, undecided</th> </tr> </thead> <tbody> <tr> <td>a. If it is absolutely necessary to make ends meet</td> <td>(299) 1 ☐</td> <td>2 ☐</td> <td>3 ☐</td> <td>4 ☐</td> <td>5 ☐</td> </tr> <tr> <td>b. If she wants to work and her husband agrees</td> <td>(300) 1 ☐</td> <td>2 ☐</td> <td>3 ☐</td> <td>4 ☐</td> <td>5 ☐</td> </tr> <tr> <td>c. If she wants to work, even if her husband does not particularly like the idea</td> <td>(301) 1 ☐</td> <td>2 ☐</td> <td>3 ☐</td> <td>4 ☐</td> <td>5 ☐</td> </tr> </tbody> </table>		Statements	Definitely all right	Probably all right	Probably not all right	Definitely not all right	No opinion, undecided	a. If it is absolutely necessary to make ends meet	(299) 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	b. If she wants to work and her husband agrees	(300) 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	c. If she wants to work, even if her husband does not particularly like the idea	(301) 1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
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II. WORK ATTITUDES - Continued

39. We would like to find out whether people's outlook on life has any effect on the kind of jobs they have, the way they look for work, how much they work, and matters of that kind. On each of these cards is a pair of statements, numbered 1 or 2. For each pair, please select ONE statement which is closer to your opinion. In addition, tell me whether the statement you select is MUCH CLOSER to your opinion or SLIGHTLY CLOSER.

In some cases you may find that you believe both statements, in other cases you may believe neither one. Even when you feel this way about a pair of statements, select the one statement which is more nearly true in your opinion.

Try to consider each pair of statements separately when making your choices; do not be influenced by your previous choices.

a. (302) 1 Many of the unhappy things in people's lives are partly due to bad luck.

2 People's misfortunes result from the mistakes they make.

Is this statement much closer or slightly closer to your opinion?

8 ☐ Much 9 ☐ Slightly

b. (303) 1 In the long run, people get the respect they deserve in this world.

2 Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

Is this statement much closer or slightly closer to your opinion?

8 ☐ Much 9 ☐ Slightly

c. (304) 1 Without the right breaks, one cannot be an effective leader.

2 Capable people who fail to become leaders have not taken advantage of their opportunities.

Is this statement much closer or slightly closer to your opinion?

8 ☐ Much 9 ☐ Slightly

d. (305) 1 Becoming a success is a matter of hard work: luck has little or nothing to do with it.

2 Getting a good job depends mainly on being in the right place at the right time.

Is this statement much closer or slightly closer to your opinion?

8 ☐ Much 9 ☐ Slightly

e. (306) 1 What happens to me is my own doing.

2 Sometimes I feel that I don't have enough control over the direction my life is taking.

Is this statement much closer or slightly closer to your opinion?

8 ☐ Much 9 ☐ Slightly

f. (307) 1 When I make plans, I am almost certain that I can make them work.

2 It is not always wise to plan too far ahead, because many things turn out to be a matter of good or bad fortune anyhow.

Is this statement much closer or slightly closer to your opinion?

8 ☐ Much 9 ☐ Slightly

g. (308) 1 In my case, getting what I want has little or nothing to do with luck.

2 Many times we might just as well decide what to do by flipping a coin.

Is this statement much closer or slightly closer to your opinion?

8 ☐ Much 9 ☐ Slightly

II. WORK ATTITUDES - Continued

39h. (309) 1 ☐ Who gets to be boss often depends on who was lucky enough to be in the right place first.

2 ☐ Getting people to do the right thing depends upon ability; luck has little or nothing to do with it.

Is this statement much closer or slightly closer to your opinion?

a ☐ Much 9 ☐ Slightly

i. (310) 1 ☐ Most people don't realize the extent to which their lives are controlled by accidental happenings.

2 ☐ There is really no such thing as "luck."

Is this statement much closer or slightly closer to your opinion?

a ☐ Much 9 ☐ Slightly

j. (311) 1 ☐ In the long run, the bad things that happen to us are balanced by the good ones.

2 ☐ Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

Is this statement much closer or slightly closer to your opinion?

a ☐ Much 9 ☐ Slightly

k. (312) 1 ☐ Many times I feel that I have little influence over the things that happen to me.

2 ☐ It is impossible for me to believe that chance or luck plays an important role in my life.

Is this statement much closer or slightly closer to your opinion?

a ☐ Much 9 ☐ Slightly

(313)

Notes

(314)

III. RETROSPECTIVE WORK HISTORY	
This is the fourth time over the past five years that we have talked to you about portions of your work experience. Now we'd like you to look back over the whole period and give some of your reactions to it.	
CHECK ITEM N	☐ Respondents with same employer (or self-employed status) as in 1966 (Item 117R is same as 6a (1-4) or 6d) - ASK 40a ☐ All others - SKIP to 43a, on page 17
40a. Since we first talked with you in June of 1966, have you ever looked for another job except during periods of layoff? b. Would you say that you have looked for another job frequently, occasionally or just once? c. In what year was that (most recent if more than one)? d. Why did you decide to look for another job at that (this) time? e. How did you go about looking? (Mark all methods used, do not read list) f. What kind of work were you looking for? g. Were you looking for work in the same local area as you were living at that time? h. Did you find a job that you could have had? i. What kind of work was it? j. What kind of business or industry was it? k. Where was the job located? l. What would the job have paid? m. How many hours per week would the job have involved? n. Did you accept this job? o. Why did you decide not to take it? p. Why do you think you were unable to find anything?	40a. (315) 1 ☐ Yes - ASK b 2 ☐ No - SKIP to 41a b. (316) 1 ☐ Frequently 2 ☐ Occasionally 3 ☐ Just once c. (317) 19__ Year d. (318) [] [] (319) [] [] e. (320) Check with { 1 ☐ State employment agency (or counselor) 2 ☐ Private employment agency 3 ☐ Employer directly 4 ☐ Friends or relatives 5 ☐ Placed or answered ads 6 ☐ Other - Specify <u> </u> f. (321) [] [] [] g. (322) 1 ☐ Yes 2 ☐ No h. (323) 1 ☐ Yes - ASK i 2 ☐ No - SKIP to p i. (324) [] [] [] j. (325) [] [] [] k. (326) [] [] [] County _____ State _____ l. (327) \$ _____ per <u> </u> (Dollars) (Cents) (328) 1 Hour (329) \$ _____ 00 per <u> </u> (Dollars only) (330) 2 ☐ Day 3 ☐ Week 4 ☐ Biweekly 5 ☐ Month 6 ☐ Year 7 ☐ Other - Specify <u> </u> m. (331) _____ Hours per week n. (332) 1 ☐ Yes - SKIP to 43a, on page 17 2 ☐ No - ASK o o. (333) [] [] (334) [] [] p. (335) [] [] (336) [] []

III. RETROSPECTIVE WORK HISTORY - Continued

41a. Since we first talked with you in June of 1966, has any other employer made you a definite offer of a full-time job that you did not accept?	41a. ☐ Yes - How many times? (337) _____ - ASK b ☐ No - SKIP to 42a
b. In what year was that (most recent if more than one)?	b. (338) 19____ Year
c. How did you happen to get the offer?	c. (339) 1 ☐ Job offered by a friend, relative 2 ☐ Job offered by a business acquaintance 3 ☒ Job offered by a former employer 4 ☐ Other - Specify _____
d. What kind of work was it?	d. (340) _____
e. What kind of business or industry was it?	e. (341) _____
f. Was this job located in the same local area as you were living at that time?	f. (342) 1 ☐ Yes 2 ☐ No
g. What would the job have paid?	g. (343) \$ _____ per: (Dollars) (Cents) (344) 1 ☐ Hour (345) \$ _____ 00 per: (Dollars only) (346) 2 ☐ Day 3 ☐ Week 4 ☐ Biweekly 5 ☐ Month 6 ☐ Year 7 ☐ Other - Specify _____
h. How many hours per week would this job have involved?	h. (347) _____ Hours per week
i. Why did you decide not to take it?	i. (348) _____ (349) _____ } SKIP to 43a
☐ If item 40a is "Yes" - SKIP to 43a	
42a. During this period have you ever seriously thought of looking for another job?	42a. (350) 1 ☐ Yes - ASK b 2 ☐ No - ASK d
b. Why would you say you've thought of looking?	b. (351) _____ (352) _____
c. Why didn't you actually look for a job?	c. (353) _____ (354) _____ } SKIP to 43a
d. Why not?	d. (355) _____ (356) _____

III. RETROSPECTIVE WORK HISTORY - Continued

43a. All in all, so far as your work concerned, would you say that you've progressed during the past five years, moved backward, or just about held your own? b. In what way(s) would you say you have progressed? c. In what way(s) would you say you have moved backward?	43a. (357) 1 ☐ Progressed - ASK b 2 ☐ Moved backward - SKIP to c 3 ☐ Held own 4 ☐ Retired } SKIP to 44a b. (358) ☐ ☐ (359) ☐ ☐ (360) ☐ ☐ c. (361) ☐ ☐ (362) ☐ ☐ (363) ☐ ☐
44a. During the past five years, do you feel that so far as work is concerned, you have been in any way discriminated against because of your age? b. In what way (s)?	44a. (364) 1 ☐ Yes - ASK b 2 ☐ No - SKIP to 45a b. (365) ☐ ☐ (366) ☐ ☐ (367) ☐ ☐
45a. During that period, do you feel that so far as work is concerned, you have been in any way discriminated against because of race, religion, nationality, or for any other reason? b. For what reason? c. In what ways have you been discriminated against?	45a. (368) 1 ☐ Yes - ASK b and c 2 ☐ No { If Negro, SKIP to 46a All others, SKIP to 47 b. (369) 1 ☐ Race 2 ☐ Religion 3 ☐ Nationality 4 ☐ Other - Specify _____ c. (370) ☐ ☐ (371) ☐ ☐ (372) ☐ ☐ If Negro, ASK 46a. All others, SKIP to 47.
46a. So far as you know, are there (other) employers in this area who discriminate against Negroes, such as by refusing to hire or promote them? b. Would you say most employers, many employers, some employers, or few employers in this area discriminate against Negroes?	46a. (373) 1 ☐ Yes - ASK b 2 ☐ No 3 ☐ Don't know } SKIP to 47 b. (374) 1 ☐ Most employers 2 ☐ Many employers 3 ☐ Some employers 4 ☐ Few employers
47. Excluding paid vacations and paid sick leave, since June 1966 - in about how many different weeks were you NOT working?	47. (375) _____ Weeks - ASK 48a 0 ☐ None - SKIP to Check Item O

III. RETROSPECTIVE WORK HISTORY - Continued

48a. How many of these (entry in 47) weeks were you looking for work or on layoff from a job?	48a. ☐ 376 _____ Weeks ☐ 0 None
b. That means there were about (entry in 47 less entry in 48a) weeks since June 1966 that you were not working, or looking for work. Is that correct?	b. ☐ 377 _____ Weeks ☐ 378 ☐ Yes - GO to Check Item O ☐ 2 No - Determine whether 47 or 48a is incorrect and make necessary correction.
CHECK ITEM O	☐ In Labor Force Group A ("WK" or "J" in I or "Yes" in 2a or 3a) - ASK 49 ☐ All others - SKIP to Check Item P
49. As you look back over the past five years, would you say that - a. The pressures you feel in your job have increased, decreased, or remained about the same? b. There has been any change in your ability to keep up with the pace of your job? c. The amount of fatigue you feel at the end of a work day has increased, decreased, or remained about the same?	49. ☐ 379 ☐ Increased ☐ 2 Decreased ☐ 3 Remained about the same b. ☐ 380 ☐ Yes ☐ 2 Is it easier? ☐ 3 Is it harder? ☐ 4 No c. ☐ 381 ☐ Increased ☐ 2 Decreased ☐ 3 Remained about the same
Notes	☐ 382 _____ ☐ 383 _____

IV. PLANS FOR THE FUTURE	
CHECK ITEM P	☐ Respondent in Labor Force Group A ("WK" or "J" in I or "Yes" in 2a or 3a) - ASK 50a ☐ All others - SKIP to 51a
50a. Is there a compulsory retirement plan where you work; that is, do you have to stop working at your present job at a certain age?	50a. 384 1 ☐ Yes - ASK b 2 ☐ No 3 ☐ Don't know } SKIP to 51a
b. At what age?	b. 385 _____ Age x ☐ Don't know
c. Would you work longer than that if you could?	c. 386 1 ☐ Yes - ASK d 2 ☐ No - SKIP to f
d. If there were no compulsory retirement, at what age would you expect to stop working at your regular job?	d. 387 _____ Age - SKIP to 52a 388 1 ☐ Don't plan to stop working - ASK e 2 ☐ Don't know - SKIP to 52a
e. Why would you never expect to retire?	e. 389 ☐ _____ _____ SKIP to 52a
f. Do you expect to retire before this age?	f. 390 1 ☐ Yes - ASK 51a 2 ☐ No - SKIP to 52a
51a. At what age do you expect to stop working at your (a) regular job?	51a. 391 _____ Age } SKIP to 52a 392 1 ☐ Don't know 2 ☐ Already stopped - SKIP to Check Item Q 3 ☐ Don't plan to stop working - ASK b
b. Why do you never expect to retire?	b. 393 ☐ _____ _____ SKIP to 53a
52a. Have you given any thought to what you will do after you retire from your (a) regular job?	52a. 394 1 ☐ Yes - ASK b 2 ☐ No - SKIP to 53a
b. What do you think you will do? <i>(Mark all that apply)</i>	b. 395 1 ☐ Travel; visit friends 2 ☐ Relax; take it easy 3 ☐ Enjoy a hobby 4 ☐ Take another job; go into business - ASK c 5 ☐ Other - Specify _____ SKIP to 53a
c. What kind of job (business)?	c. 396 ☐ ☐ ☐
d. How many hours a week do you think you will want to work?	d. 397 _____ Hours per week
53a. When you reach retirement age, will you be eligible for Social Security or Railroad Retirement benefits?	53a. 398 1 ☐ Yes - ASK b 2 ☐ No - SKIP to Check Item Q
b. How much income per month can you (and your wife) expect from Social Security or Railroad Retirement?	b. 399 \$ _____ 00 per month 400 1 ☐ The maximum amount 2 ☐ Don't know
Refer to Item I18R on Information Sheet.	
CHECK ITEM Q	☐ Response in items 50 or 51 is the same as response in 1969 - SKIP to Check Item R ☐ Response in 1969 was NA - SKIP to Check Item R ☐ Response in items 50 or 51 is different from response in 1969 - ASK 54

IV. PLANS FOR THE FUTURE - Continued	
54. When we talked to you two years ago, you said that you (entry in item 118R on Information Sheet). Is there any particular reason why you've changed your mind?	54. (401) ☐ _____
CHECK ITEM R ☐ "Already stopped" in 51a - SKIP to Check Item S ☐ Respondent in Labor Force Group A and "P" or "G" in 6d - ASK 55a ☐ All others - SKIP to 56	
55a. Does your employer or union have a pension plan, other than Social Security or Railroad Retirement, that will provide some income to you when you reach retirement age? b. If you stay on this job, at what age will you be eligible to receive FULL benefits from this plan? c. At what age did you become eligible? d. Why will you never be eligible for FULL benefits? e. Is there any earlier age at which you would be eligible to receive REDUCED benefits from this plan? f. At what age did you become eligible? g. How much income per month would you be eligible for if you were to receive reduced benefits? h. If you left this job today, could you later start drawing a benefit? i. At what age could you draw this benefit? j. Under these circumstances, how much income per month would you be eligible for? k. If you were to retire today, how much income per month would you get under this pension plan? ☐ Never eligible in 55b - SKIP to 56 l. If you were to continue to work with your present employer until you are eligible for full retirement benefits, how much income per month would you get under this pension plan?	55a. (402) 1 ☐ Yes - ASK b 2 ☐ No 3 ☐ Don't know } SKIP to 56 b. (403) _____ Age } SKIP to e (404) 1 ☐ Don't know 2 ☐ Already eligible - ASK c 3 ☐ Never - SKIP to d c. (405) _____ Age - SKIP to k d. (406) 1 ☐ Haven't worked at job long enough 2 ☐ Will get lump sum 3 ☐ Other reasons related to company rules 4 ☐ Other - Specify _____ 5 ☐ Don't know e. ☐ Yes - At what age? (407) _____ Age - SKIP to g (408) 1 ☐ No 2 ☐ Don't know } SKIP to h 3 ☐ Already eligible - ASK f 4 ☐ Never - SKIP to h f. (409) _____ Age g. (410) \$ _____ . 00 per month h. (411) 1 ☐ Yes - ASK i 2 ☐ No - SKIP to l i. (412) _____ Age j. (413) \$ _____ . 00 per month - SKIP to i k. (414) \$ _____ . 00 per month - SKIP to 56 l. (415) \$ _____ . 00 per month x ☐ Don't know
☐ If the answer to 51a was "Don't plan to stop working" - SKIP to question 59 56. Some people look forward to retirement because they wish to have more time to do things; others think they might be bored after they retire. How do you feel about it?	56. (416) 1 ☐ Look forward to it 2 ☐ Bored after they retire 3 ☐ Other - Specify _____

IV. PLANS FOR THE FUTURE - Continued	
Respondent not married - SKIP to 58	
57. Would your wife like for you to retire as soon as possible or would she prefer for you to keep working?	57. (417) 1 ☐ Retire as soon as possible 2 ☐ Keep working 3 ☐ Do whatever I want to 4 ☐ Other - Specify _____
58. After you retire, do you think you will have financial problems?	58. (418) 1 ☐ Yes 2 ☐ No 3 ☐ Don't know
59. When people retire from their jobs they may receive income from several sources. When you reach retirement age about how much income per month or per year would you get from all sources if you did not work at all? Include even such things as income from interest on savings accounts and annuities.	59. (419) \$ _____ 00 per month or (420) \$ _____ 00 per year
60a. Among your friends, is there anyone who is retired?	60a. (421) 1 ☐ Yes - ASK b 2 ☐ No - SKIP to 61
b. Overall, how happy would you say he (they) is (are) with retirement - very happy, fairly happy, somewhat unhappy, or very unhappy?	b. (422) 1 ☐ Very happy 2 ☐ Fairly happy 3 ☐ Somewhat unhappy 4 ☐ Very unhappy
61. Considering your circle of friends, would you say that most of them will retire from their regular jobs at age 65, before 65, or after 65?	61. (423) 1 ☐ 65 2 ☐ Before 65 3 ☐ After 65
☐ If elderly relative in room, mark the "Elderly relative in room" box and go to Check Item S.	
62. At what age do you think you will have no dependents (other than you)?	62. (424) _____ Age (425) 1 ☐ Elderly relative in room 2 ☐ No dependents now 3 ☐ Don't know 4 ☐ Never
CHECK ITEM S	☐ Respondent has son(s) in household - ASK 63a ☐ All others - SKIP to Check Item U
63a. Is (are any of) your son(s) currently attending or enrolled in school?	63a. (426) 1 ☐ Yes - ASK 63b 2 ☐ No - SKIP to Check Item U
b. Let's talk about your (youngest) son in school. How much education would you like him to get?	b. (427) 1 ☐ Less than High school 12 2 ☐ High school 12 3 ☐ College 2 4 ☐ College 4 5 ☐ College 6 6 ☐ College 7+ 7 ☐ Don't know
c. How much education do you think he will actually get?	c. (428) 1 ☐ Less than High school 12 2 ☐ High school 12 3 ☐ College 2 4 ☐ College 4 5 ☐ College 6 6 ☐ College 7+ 7 ☐ Don't know
CHECK ITEM T	☐ Response to 63c is less than 63b - ASK 63d ☐ All others - SKIP to Check Item U
63d. Why do you think he will get less education than you would like?	63d. (429) 1 ☐ Marriage, family responsibility 2 ☐ Financial reasons 3 ☐ Lack of motivation 4 ☐ Lack of academic ability 5 ☐ Armed Forces 6 ☐ Other - Specify _____

IV. PLANS FOR THE FUTURE - Continued	
CHECK ITEM U	☐ Respondent has daughter(s) in household - ASK 64a ☐ All others - SK/P to 65
64a. Is (are any of) your daughter(s) currently attending or enrolled in school?	64a. (430) 1 ☐ Yes - ASK b 2 ☐ No - SK/P to 65
b. Let's talk about your (youngest) daughter in school. How much education would you like her to get?	b. (431) 1 ☐ Less than High school 12 2 ☐ High school 12 3 ☐ College 2 4 ☐ College 4 5 ☐ College 6 6 ☐ College 7+ 7 ☐ Don't know
c. How much education do you think she will actually get?	c. (432) 1 ☐ Less than High school 12 2 ☐ High school 12 3 ☐ College 2 4 ☐ College 4 5 ☐ College 6 6 ☐ College 7+ 7 ☐ Don't know
CHECK ITEM V	☐ Response to 64c is less than 64b - ASK 64d ☐ All others - SK/P to 65
64d. Why do you think she will get less education than you would like?	64d. (433) 1 ☐ Marriage, family responsibility 2 ☐ Financial reasons 3 ☐ Lack of motivation 4 ☐ Lack of academic ability 5 ☐ Other - Specify _____
65. Some people would like to leave an inheritance to their children, others believe that once the children leave home, parents have no further obligation. How do you feel about this?	65. (434) 1 ☐ Want to leave inheritance 2 ☐ No further obligation 3 ☐ Don't know
Notes	

V. HEALTH

66a. Do you have any health problem or condition that limits in any way the amount or kind of work you can do?

66a.

- (435) 1 ☐ Yes - SKIP to 67a
2 ☐ No - ASK b

b. Do you have any health problem or condition that in any way limits your other activities?

b.

- (436) 1 ☐ Yes - ASK 67a
2 ☐ No - SKIP to Check Item W

67a. How long have you been limited in this way?

67a.

Record actual time and mark the appropriate box:

- (437) _____ Years OR
(438) _____ Months
(439) 1 ☐ Less than 3 months
2 ☐ 3 months, but less than 6 months
3 ☐ 6 months, but less than 1 year
4 ☐ 1 year, but less than 3 years
5 ☐ 3 years, but less than 5 years
6 ☐ 5 years, but less than 10 years
7 ☐ 10 years or longer, but less than life
8 ☐ All my life

SHOW FLASHCARD (A)

b. Do you ever have any difficulty performing any of the activities on this card?

b.

- (440) 1 ☐ No
2 ☐ Yes - Which ones? - Mark each activity mentioned and for each marked ask -

Can you . . . at all?

Yes No

- | | | |
|--|----------------------------|----------------------------|
| (441) 1 ☐ Walking | 2 ☐ | 3 ☐ |
| (442) 2 ☐ Using stairs or inclines | 2 ☐ | 3 ☐ |
| (443) 3 ☐ Standing for long period of time | 2 ☐ | 3 ☐ |
| (444) 4 ☐ Sitting for long periods | 2 ☐ | 3 ☐ |
| (445) 5 ☐ Stooping, kneeling or crouching | 2 ☐ | 3 ☐ |
| (446) 6 ☐ Lifting or carrying weights up to 10 lbs. | 2 ☐ | 3 ☐ |
| (447) 7 ☐ Lifting or carrying heavy weights | 2 ☐ | 3 ☐ |
| (448) 8 ☐ Reaching | 2 ☐ | 3 ☐ |
| (449) 9 ☐ Handling and fingering | 2 ☐ | 3 ☐ |
| (450) 10 ☐ Seeing (even with glasses) | 2 ☐ | 3 ☐ |
| (451) 11 ☐ Hearing | 2 ☐ | 3 ☐ |
| (452) 12 ☐ Dealing with people | 2 ☐ | 3 ☐ |
| (453) 13 ☐ Other - Specify _____ | 2 ☐ | 3 ☐ |

SHOW FLASHCARD (B)

c. Are there any things on this card that bother you enough to be a problem?

c.

- (454) 1 ☐ No
2 ☐ Yes - Which ones? - Mark each activity mentioned.
(455) 1 ☐ Pain
2 ☐ Tiring easily, no energy
3 ☐ Weakness, lack of strength
4 ☐ Aches, swelling, sick feeling
(456) 5 ☐ Fainting spells, dizziness
6 ☐ Nervousness, tension, anxiety, depression
7 ☐ Shortness of breath, trouble breathing
8 ☐ Other - Specify _____

V. HEALTH - Continued

SHOW FLASHCARD (C)

67d. Which of these conditions would you have trouble working under BECAUSE OF YOUR HEALTH?

(Mark as many as apply)

67d.

- (457) 1 ☐ Fumes, dust or smoke
 2 ☐ Hot places
 3 ☐ Cold places
 4 ☐ Damp places
 5 ☐ Noise or vibrations
 (458) 6 ☐ Confusion or disorder
 7 ☐ Working indoors
 8 ☐ Working outdoors
 9 ☐ Other - Specify _____
 0 ☐ None

e. Are you able to go outdoors without help from another person?

e.

- (459) 1 ☐ Yes
 2 ☐ No

f. Are you able to use public transportation, such as trains or buses, without help from another person?

f.

- (460) 1 ☐ Yes
 2 ☐ No

g. Do you ever need help from others in looking after your personal care such as dressing, bathing, eating, and other daily activities?

g.

- (461) 1 ☐ Yes - ASK h
 2 ☐ No - SKIP to i

h. Would you say you need this kind of help frequently, occasionally, or rarely?

h.

- (462) 1 ☐ Frequently
 2 ☐ Occasionally
 3 ☐ Rarely

i. During the past three years, has your health condition become better, worse, or remained about the same?

i.

- (463) 1 ☐ Better
 2 ☐ Worse
 3 ☐ Same

CHECK

ITEM W

☐ Respondent currently married - ASK 68

☐ All others - SKIP to 71a

68. Does your wife's health or physical condition limit the amount or kind of work she can do?

68.

- (464) 1 ☐ Yes - ASK 69
 2 ☐ No - SKIP to 71a

69. How long has she been limited in this way?

69.

- (465) 1 ☐ Under 3 months
 2 ☐ 3 months, but less than 6 months
 3 ☐ 6 months, but less than 1 year
 4 ☐ 1 year, but less than 3 years
 5 ☐ 3 years or more

70a. Is she able to go outdoors without help from another person?

70a.

- (466) 1 ☐ Yes
 2 ☐ No

b. Is she able to use public transportation, such as trains or buses, without help from another person?

b.

- (467) 1 ☐ Yes
 2 ☐ No

c. Does she ever need help from others in looking after her personal care such as dressing, bathing, eating and other daily activities?

c.

- (468) 1 ☐ Yes - ASK d
 2 ☐ No - SKIP to e

d. Would you say she needs this kind of help frequently, occasionally, or rarely?

d.

- (469) 1 ☐ Frequently
 2 ☐ Occasionally
 3 ☐ Rarely

e. Does the health condition of your wife in any way affect the kind or amount of work you do or where you work?

e.

- (470) 1 ☐ Yes - How?

 0 ☐ No

V. HEALTH - Continued	
71a. Is there anyone (else) in this family living here who is not working or not going to school because of poor health? (Mark as many as apply)	71a. 471 ☐ Yes - Who is it? 1 ☐ Son 2 ☐ Daughter 3 ☐ Parents (in-laws) 4 ☐ Grandchildren 5 ☐ Other - Specify _____ 6 ☐ No - SKIP to 72a
b. Does the health condition of this person in any way affect the kind or amount of work you do or where you work?	b. 472 ☐ Yes - How? ➤ _____ _____ _____ ☐ No
Notes	
473 474 475	

VI. EDUCATION AND TRAINING

72a. Since we last interviewed you, have you taken any training courses or educational programs of any kind, either on the job or elsewhere?

b. What kind of training did you take?
(Specify below, then mark one box)

c. Where did you take this training?
(Record reply below, then mark one box)

d. How long did you attend this program?

e. How many hours per week did you spend on this program?

f. Did you complete this program?

g. Why didn't you complete this program?

h. Why did you decide to take this program?

i. Do you see any possibility of using this training after you retire?

☐ Respondent not currently employed - SKIP to 73a

j. Do you use this training on your present job?

72a.

- (476) 1 ☐ Yes - ASK b-1
2 ☐ No - SKIP to 73a

b.

- (477) 1 ☐ Professional, technical
2 ☐ Managerial
3 ☐ Clerical
4 ☐ Skilled manual
5 ☐ Other - Specify _____

c.

- (478) 1 ☐ University or college
2 ☐ Business college, technical institute
3 ☐ Company training school
4 ☐ Correspondence course
5 ☐ Adult education or night school
6 ☐ Other - Specify _____

d.

- (479) _____ Weeks

e.

- (480) 1 ☐ 1-4
2 ☐ 5-9
3 ☐ 10-14
4 ☐ 15-19
5 ☐ 20 or more

f.

- (481) 1 ☐ Yes - SKIP to h
2 ☐ No, dropped out - ASK g
3 ☐ No, still enrolled - SKIP to h

g.

- (482) 1 ☐ Found a job
2 ☐ Too much time involved
3 ☐ Too expensive
4 ☐ Too difficult, uninteresting
5 ☐ Other - Specify _____

h.

- (483) 1 ☐ To get another job
2 ☐ To get ahead in job
3 ☐ For general knowledge
4 ☐ Complete requirements for diploma
5 ☐ Other - Specify _____

i.

- (484) 1 ☐ Yes
2 ☐ No

j.

- (485) 1 ☐ Yes
2 ☐ No

VI. EDUCATION AND TRAINING - Continued

73a. Do you have any plans for taking any training courses or educational programs of any kind in the near future?

- 73a. (486) 1 ☐ Yes - ASK b
2 ☐ Maybe - SKIP to e
3 ☐ No - SKIP to 74a

b. What kind of training do you plan to take?
(Specify below and mark one box)

- b. (487) 1 ☐ Professional, technical
2 ☐ Managerial
3 ☐ Clerical
4 ☐ Skilled manual
5 ☐ Other

c. When do you plan to take this training?

c. (488) _____ Month _____ Year

d. Why do you want to take this training?

- d. (489) 1 ☐ To get another job
2 ☐ To get ahead in job
3 ☐ For general knowledge
4 ☐ Complete requirements for diploma
5 ☐ Help me after retirement
6 ☐ Other - Specify _____
- } SKIP to 74a

e. On what would it depend?

e. (490) _____

Notes

VII. ASSETS AND INCOME	
74a. Is this house (apartment) owned or being bought by you (or your wife), or is it rented? If "Other," specify here _____	74a. (491) 1 ☐ Owned or being bought by respondent (or wife) - SKIP to 75a 2 ☐ Rented - ASK b 3 ☐ No cash rent } SKIP to 76a 4 ☐ Other }
b. How much rent do you pay per month?	b. (492) \$ _____ . 00 per month - SKIP to 76a
75a. About how much do you think this property would sell for on today's market?	75a. (493) \$ _____ . 00
b. How much do you (or your wife) owe on this property for mortgages, back taxes, loans, etc? (Mortgages include deeds of trust, land contracts, contracts for deed, etc.)	b. (494) \$ _____ . 00 ☐ None
76a. Do you (or your wife) rent, own, or have an investment in a farm?	76a. (495) 1 ☐ Yes - ASK b 2 ☐ No - SKIP to 77a
b. What is the total market value of your farm operation? (Include value of land, buildings, house, if you own them, and the equipment, livestock, stored crops, and other assets. Do not include crops held under Commodity Credit Loans.)	b. (496) \$ _____ . 00
c. Does that include the value of this house?	c. (497) 1 ☐ Yes 2 ☐ No
d. How much do you owe on mortgages or other debts in connection with the farm itself, the equipment, livestock, or anything else? (Do not count Commodity Credit Loans.)	d. (498) \$ _____ . 00 ☐ None
77a. Do you (or your wife) own or have an investment in a business or professional practice?	77a. (499) 1 ☐ Yes - ASK b 2 ☐ No - SKIP to 78a
b. What is the total market value of all assets in the business, including tools and equipment? In other words, how much do you think this business would sell for on today's market? (Obtain value of respondent's and wife's share only.)	b. (500) \$ _____ . 00
c. What is the total amount of debts or liabilities owed by the business? (Include all liabilities, as carried on the books. Respondent's and wife's share only.)	c. (501) \$ _____ . 00 ☐ None
78a. Do you (or your wife) own any other real estate - not counting the property on which you are living?	78a. (502) 1 ☐ Yes - ASK b 2 ☐ No - SKIP to 79a
b. About how much do you think this property would sell for on today's market?	b. (503) \$ _____ . 00
c. How much is the unpaid amount of any mortgages on this property?	c. (504) \$ _____ . 00 ☐ None
d. How much other debt do you have on this property, such as back taxes or assessments, unpaid amounts of home improvement loans, or home repair bills, etc?	d. (505) \$ _____ . 00 ☐ None
79a. Do you (or your wife) own an automobile(s)?	79a. (506) 1 ☐ Yes - ASK b-d 2 ☐ No - SKIP to 80
b. What is (are) the make and model year?	b. (507) _____ Model year _____ Make (508) _____ Model year _____ Make (509) _____ Model year _____ Make
c. Do you owe any money on this (these) automobile(s)?	c. ☐ Yes - How much? (510) \$ _____ . 00 (511) \$ _____ . 00 (512) \$ _____ . 00 ☐ No
d. How much would this (these) car(s) sell for on today's market?	d. (513) \$ _____ . 00 (514) \$ _____ . 00 (515) \$ _____ . 00

VII. ASSETS AND INCOME - Continued	
80. Do you (or other members of your family living here) have any money in savings or checking accounts, savings and loan companies, or credit unions?	80. ☐ Yes - How much? 516 \$ _____ 00 ☐ No
81. Do you (or any other members of your family living here) have any of the following - a. U.S. Savings Bonds?	81a. ☐ Yes - What is their face value? 517 \$ _____ 00 ☐ No
b. Stocks, bonds, or shares in mutual funds?	b. ☐ Yes - What is their face value? 518 \$ _____ 00 ☐ No
c. Personal loans to others or mortgages you hold (money owed to you by other people)?	c. ☐ Yes - How much? 519 \$ _____ 00 ☐ No
82. Aside from any debts you have already mentioned, do you (and your wife) now owe any money to stores, doctors, hospitals, banks, or anyone else, excluding 30-day charge accounts?	82. ☐ Yes - How much altogether? 520 \$ _____ 00 ☐ No
☐ Respondent a noninterview in 1969 - SKIP to 85 83. So far as your overall financial position is concerned, would you say you (and your wife) are better off, about the same, or worse off now than you were when we interviewed you TWO years ago?	83. 521 1 ☐ About the same - SKIP to 85 2 ☐ Better off 3 ☐ Worse off } ASK 84
84. In what ways are you (better, worse) off?	84. 522
85. Now I'd like to ask a few questions on your income in 1970.	
a. In 1970 how much did you receive from wages, salary, commissions, or tips from all jobs before deductions for taxes or anything else? ☐ Respondent not married - SKIP to c	85a. 523 \$ _____ 00 ☐ None
b. In 1970, how much did your wife receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or anything else? ☐ No other family members 14 years or older - SKIP to 86a	b. 524 \$ _____ 00 ☐ None
c. In 1970, how much did all other family members living here receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or anything else?	c. 525 \$ _____ 00 ☐ None
Notes	

VII. ASSETS AND INCOME - Continued

86a. In 1970, did you receive any income from working on your own or in your own business, professional practice, or partnership? \$ _____ less \$ _____ = \$ _____ (Gross income) (Expenses) (Net income) ☐ No other family members 14 years or older - SKIP to 87 b. In 1970, did any other family members living here receive any income from working on their own or in their own business, professional practice, or partnership? \$ _____ less \$ _____ = \$ _____ (Gross income) (Expenses) (Net income)	86a. ☐ Yes - How much? (526) \$ _____ .00 ☐ No b. ☐ Yes - How much? (527) \$ _____ .00 ☐ No																																										
87. In 1970, did your family receive any income from operating a farm? \$ _____ less \$ _____ = \$ _____ (Gross income) (Expenses) (Net income)	87. ☐ Yes - How much? (528) \$ _____ .00 ☐ No																																										
88. In addition, during 1970, did anyone in this family living here receive any rental income from roomers and boarders, an apartment in this house, or another building, or other real estate? \$ _____ less \$ _____ = \$ _____ (Gross income) (Expenses) (Net income)	88. ☐ Yes - How much? (529) \$ _____ .00 ☐ No																																										
89. In 1970, did anyone in this family living here receive interest or dividends on savings, stocks, bonds, or income from estates or trusts?	89. ☐ Yes - How much? (530) \$ _____ .00 ☐ No																																										
90a. In 1970, did you receive any unemployment compensation? ☐ No other family members 14 years or older - SKIP to 91 b. In 1970, did any other family members living here receive any unemployment compensation?	90a. ☒ Yes (531) _____ How many weeks? How much did you receive altogether? (532) \$ _____ .00 ☐ No b. ☐ Yes - How much? (533) \$ _____ .00 ☐ No																																										
91. In 1970, did anyone in this family living here receive income as a result of disability or illness such as (read list): (If "Yes," to any items in list, enter amount, indicating whether received by respondent or other family member.) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2"></th> <th colspan="2" style="text-align: center;">(Mark one)</th> <th colspan="2"></th> </tr> <tr> <th colspan="2"></th> <th style="text-align: center;">Yes</th> <th style="text-align: center;">No</th> <th style="text-align: center;">Respondent</th> <th style="text-align: center;">Other family member</th> </tr> </thead> <tbody> <tr> <td>(1) Veteran's compensation or pension?</td> <td>.....</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td>(534) \$ _____ .00</td> <td>(539) \$ _____ .00</td> </tr> <tr> <td>(2) Workmen's compensation?</td> <td>.....</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td>(535) \$ _____ .00</td> <td>(540) \$ _____ .00</td> </tr> <tr> <td>(3) Aid to the permanently and totally disabled or aid to the blind?</td> <td>.....</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td>(536) \$ _____ .00</td> <td>(541) \$ _____ .00</td> </tr> <tr> <td>(4) Social Security disability payment?</td> <td>.....</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td>(537) \$ _____ .00</td> <td>(542) \$ _____ .00</td> </tr> <tr> <td>(5) Any other disability payment? - Specify type</td> <td>.....</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td>(538) \$ _____ .00</td> <td>(543) \$ _____ .00</td> </tr> </tbody> </table>				(Mark one)						Yes	No	Respondent	Other family member	(1) Veteran's compensation or pension?		☐	☐	(534) \$ _____ .00	(539) \$ _____ .00	(2) Workmen's compensation?		☐	☐	(535) \$ _____ .00	(540) \$ _____ .00	(3) Aid to the permanently and totally disabled or aid to the blind?		☐	☐	(536) \$ _____ .00	(541) \$ _____ .00	(4) Social Security disability payment?		☐	☐	(537) \$ _____ .00	(542) \$ _____ .00	(5) Any other disability payment? - Specify type		☐	☐	(538) \$ _____ .00	(543) \$ _____ .00
		(Mark one)																																									
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(3) Aid to the permanently and totally disabled or aid to the blind?		☐	☐	(536) \$ _____ .00	(541) \$ _____ .00																																						
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(5) Any other disability payment? - Specify type		☐	☐	(538) \$ _____ .00	(543) \$ _____ .00																																						
92. In 1970, did anyone in this family living here receive any other Social Security payments such as old age or survivor's insurance?	92. ☐ Yes - Who? ☐ Respondent - How much? (544) \$ _____ .00 ☐ Wife - How much? (545) \$ _____ .00 ☐ Other - How much? (546) \$ _____ .00 ☐ No																																										

VII. ASSETS AND INCOME - Continued	
93. In 1970, did anyone in this family living here receive any (other) public assistance or welfare payments?	93. ☐ Yes - How much? (547) \$ _____ . 00 ☐ No
94a. In 1970, did anyone in this family living here buy any food stamps under the Government's Food Stamp Plan?	94a. ☐ Yes - ASK b ☐ No - SKIP to 95a
b. In how many months during 1970 did you buy stamps?	b. (548) _____ Months
c. How much was your monthly bonus?	c. (549) \$ _____ . 00
95a. In 1970, did anyone in this family living here receive any pensions from local, State, or Federal Government?	95a. ☐ Yes - Who? ☐ Respondent - How much? (550) \$ _____ . 00 ☐ Wife - How much? (551) \$ _____ . 00 ☐ Other - How much? (552) \$ _____ . 00 ☐ No
b. In 1970, did anyone in this family living here receive any other retirement pensions, such as private employee or personal retirement benefits?	b. ☐ Yes - Who? ☐ Respondent - How much? (553) \$ _____ . 00 ☐ Wife - How much? (554) \$ _____ . 00 ☐ Other - How much? (555) \$ _____ . 00 ☐ No - SKIP to 96
Respondent not marked in b - SKIP to 96 c. Is this a pension from a private employer?	c. 1 ☐ Yes - ASK d (556) 2 ☐ No - SKIP to 96
d. Are you getting pensions from more than one private employer?	d. ☐ Yes - How many? (557) _____ a ☐ No
If more than one pension received - ASK e-h about the pension providing the largest income.	
e. Would this pension be larger if you had worked longer for that employer?	e. (558) 1 ☐ Yes 2 ☐ No
f. Did you retire voluntarily or did you have to retire at that time?	f. (559) 1 ☐ Retired voluntarily 2 ☐ Had to retire
g. At what age did you begin to receive this pension?	g. (560) _____ Age
h. How many years of service did you have when you began to receive this pension?	h. (561) _____ Years

VII. ASSETS AND INCOME - Continued

96. In 1970, did anyone in this family living here receive any other type of income; for example, royalties, annuities, contributions from family members living elsewhere, etc.?	96. ☐ Yes - How much? ☒ No (562) \$ _____ 00
SHOW INCOME FLASHCARD 97. What was the total income of this family during 1969? Include wages, salaries, net income from business or farm, pensions, dividends, interest, rent and any other money income received by you and all family members living with you?	97. (563) ☐ 1 Under \$2,000 ☐ 2 2,000 - 2,999 ☐ 3 3,000 - 3,999 ☐ 4 4,000 - 4,999 ☐ 5 5,000 - 5,999 ☐ 6 6,000 - 6,999 ☐ 7 7,000 - 7,999 ☐ 8 8,000 - 9,999 ☐ 9 10,000 - 14,999 ☐ 10 15,000 - 24,999 ☐ 11 25,000 and over
Notes	(564) _____ (565) _____ (566) _____

VIII. FAMILY BACKGROUND	
CHECK ITEM X	Refer to item 119R on Information Sheet. ☐ Respondent's parents are dead — SKIP to 98b ☐ All others — ASK 98a
98a. Now I have some questions on your family background. Are your mother and father living? b. Did you live with your mother when you were 15 years old? c. Did your mother work for pay when you were 15 years old? d. Was a foreign language spoken regularly in your home when you were 15 years old? e. In what State did you last attend high school?	98a. (567) ☐ BOTH parents alive ☐ MOTHER alive, father dead ☐ FATHER alive, mother dead ☐ NEITHER parent alive b. (568) ☐ Yes — ASK c ☐ No — SKIP to d c. (569) ☐ Yes ☐ No d. ☐ Yes — What language? (570) _____ ☐ No e. (571) _____ State ☐ Did not attend high school
CHECK ITEM Y	Refer to item 120R on Information Sheet and item 13, cover page. ☐ Respondent not married ☐ Respondent's wife's parents are dead } SKIP to 100a ☐ All others — ASK 99
99. Are your wife's mother and father living? 100a. How many persons, not counting yourself (or your wife), are dependent upon you (or your wife) for at least one-half of their support? b. Do any of these dependents live somewhere else other than here at home with you? c. What is their relationship to you?	99. (572) ☐ BOTH parents alive ☐ MOTHER alive, father dead ☐ FATHER alive, mother dead ☐ NEITHER parent alive 100a. (573) _____ Number — ASK b ☐ None — SKIP to Check Item Z b. ☐ Yes — How many? (574) _____ ASK c ☐ No — SKIP to Check Item Z c. (575) _____
CHECK ITEM Z	Determine whether or not respondent lives in the same area (SMSA or county) as when last interviewed. (576) ☐ Respondent lives in same area (SMSA or county) as when last interviewed — SKIP to 103 ☐ Respondent lives in different area (SMSA or county) than when last interviewed — ASK 101a
101a. When we last interviewed you, you were living in a different area. How many miles from here is that? b. How did you happen to move here?	101a. (577) _____ Miles b. (578) _____
102a. Did you have a job lined up here at the time you moved? b. How many weeks did you look before you found work? (1) How many weeks did you look before you moved? (2) How many weeks did you look after you moved? c. Since we last interviewed you, have you lived in any area (SMSA or county) other than the present one or the one in which you lived when we interviewed you last?	102a. (579) ☐ Yes, different from job held at time of move ☐ Yes, same as job held at time of move ☐ Yes, transferred job in same company ☐ No — ASK b } SKIP to c b. (580) _____ Total weeks ☐ Did not look for work — SKIP to c ☐ Still haven't found work (1) (581) _____ Weeks before (2) (582) _____ Weeks after c. ☐ Yes — How many? (583) _____ } SKIP to 104 ☐ No
103. Have you lived in any area (SMSA or county) other than the present one since we last interviewed you?	(584) ☐ Yes — How many? ☐ No

Now I have a few questions about the education and work experience of the other family members living here.

Line number	Name List below all persons living here who are related to respondent. Enter line number from the Household Record Card in Column 104.	Relationship to respondent Example: wife, son, daughter-in-law, brother, etc.	Age As of July 1, 1971	Persons 6-24 years old			Did "Yes" or "No" finish this grade (year)? If "No" - What is the highest grade ever attended?	In the past 12 weeks did you work either full- or part-time, counting work around the house?	Persons 14 years old and over	
				Is attending or enrolled in school? Circle Y - Yes N - No	What grade (year)?	What grade (year)?			In the weeks that... how many hours did... usually work per week?	If person worked at all in the past 12 months - What kind of work was... doing in the past 12 months? If more than one, record the longest.
104	105a	105b	105c	106	107	108	109	110	111	
		Respondent								
				Y		Y	588			589
				Y		Y	592			593
				Y		Y	596			597
				Y		Y	600			601
				Y		Y	604			605
				Y		Y	608			609
				Y		Y	612			613
				Y		Y	616			617
				Y		Y	620			621
				Y		Y	624			625
				Y		Y	628			629
				Y		Y	632			633
				Y		Y	636			637
				Y		Y	640			641
				Y		Y	644			645
				Y		Y	648			649
				Y		Y	652			653
				Y		Y	656			657
				Y		Y	660			661
				Y		Y	664			665
				Y		Y	668			669
				Y		Y	672			673
				Y		Y	676			677

112. When we last interviewed you, you mentioned (read names from item 121R on Information Sheet) as persons who will always know where you can be reached even if you moved away. Is this still true? (If so, verify the addresses and telephone numbers and enter below. If not, enter information about other persons who will know the respondent's whereabouts.)		Telephone number	NONINTERVIEWS IN 1969	
		Address	Ask the following questions of all respondents who were noninterviews in 1969. Transcribe the answers to the appropriate item on the Information Sheet, then proceed with the regular interview. A. What were you doing at this time in 1969 - working or something else? 1. Working 2. With a job, not at work 3. Looking for work 4. Retired 5. Unable to work 6. Other - Specify _____ } ASK B } END of questions <i>Transcribe entries as follows:</i> 1. If box 1 or 2 is checked, mark "Labor Force Group A" in 113R. 2. If box 3 is checked, mark "Labor Force Group B" in 113R. 3. If box 4 or 6 is checked, mark "Labor Force Group C" in 113R. 4. If box 5 is checked, mark "Unable to work" in 113R.	
		Relationship to respondent	B. For whom did you work? _____ _____ _____ <i>Transfer name of employer to 114R</i>	
			C. What kind of work were you doing? _____ _____ _____ <i>Transfer kind of work to 115R</i>	
WHEN THE TRANSCRIPTION HAS BEEN COMPLETED, BEGIN THE REGULAR INTERVIEW WITH ITEM 1.				
Notes		OFFICE USE ONLY		
		122R. ☐ Noninterview in 1968 (1) Name of employer in 1968 _____ _____ ☐ Not employed in 1968		
		123R. (1) Name of employer in 1967 _____ _____ ☐ Not employed in 1967		
		124R. Residence in 1966 City _____ State _____		

INFORMATION SHEET DATA FROM 1966 AND 1969 INTERVIEWS								
113R.	Labor Force Group in 1969							
(678)	1 ☐ A 2 ☐ B 3 ☐ C 4 ☐ Unable to work							
114R.	Name of employer in 1969							
	_____ ☐ Not employed in 1969							
115R.	Kind of work done in 1969							
116R.	Date of last interview							
(679)	<table border="1"> <tr> <td>Month</td> <td>Day</td> <td>Year</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </table>		Month	Day	Year	_____	_____	_____
Month	Day	Year						
_____	_____	_____						
117R.	Name of employer in 1966							
	_____ ☐ Self-employed in 1966 ☐ Not employed in 1966							
118R.	Retirement plans in 1969							
(680)	_____ Age 1 ☐ Don't plan to stop working 2 ☐ Already stopped 3 ☐ Don't know 4 ☐ NA (includes "noninterview" and "blank" in 1969)							
119R.	Status of respondent's parents in 1969							
(681)	1 ☐ Both parents of respondent are dead 2 ☐ All other							
120R.	Status of wife's parents in 1969							
(682)	1 ☐ Respondent not married 2 ☐ Both parents of the respondent's wife are dead 3 ☐ All other							
121R.	Names, addresses and telephone numbers of persons who will always know where the respondent can be reached.							
	1. _____ _____ _____ _____ 2. _____ _____ _____							